AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT	1. CONTRACT ID CODE	PAGE OF PAGES
		1 | 2

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE	5. PROJECT NO. (If applicable)
W9127824B0002-0001	5 APRIL 2024		CHC22012

6. ISSUED BY CODE	7. ADMINISTERED BY(If other than item 6) CODE
Corps of Engineers 109 St. Joseph St. Mobile, AL 36602	

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP code)	☒	9A. AMENDMENT OF SOLICITATION NO. W9127824B0002 9B. DATED (SEE ITEM 11) 22 MARCH 2024
	☐	10A. MODIFICATION OF CONTRACT/ORDER NO. 10B. DATED (SEE ITEM 13)
CODE FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers ☐ is extended, ☒ is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(if required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

☐	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A
☐	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO AUTHORITY OF FAR 43.103(b)
☐	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
☐	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

The subject solicitation for: **MOBILE HARBOR, ALABAMA, DEEPENING AND WIDENING – PHASE 2B MOBILE, ALABAMA**

Is modified in the following: **REFER TO THE ENCLOSED REVISED SPECIFICATIONS FOR AMENDMENT NO. 0001**

Except as provided herein, all terms and conditions of the document reference in item 9A or 10A, as Heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICE (Type or print)	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY (Signature of contracting officer)	16C. DATE SIGNED

PART I - REVISIONS MADE BY ADDED AND/OR REPLACEMENT PARAGRAPHS/PAGES/SECTIONS

The items listed below are to be replaced by the corresponding added and/or revised paragraphs/pages or sections. Added and/or revised paragraphs/pages or sections are indicated by a note in bottom right hand corner of each paragraph or page. Added sections are hereby made a part of the contract and are to be inserted in the specification in the proper numerical/alphabetical sequence.

Within the specifications, deletions from the specifications are indicated by strikethrough, e.g.: ~~deletions are marked with strikethrough~~ and additions to the specifications including revisions/substitutions are indicated in bold, italic and underlined, e.g.: ***additions are indicated thus.***

SECTION	Corresponding Added or Revised Paragraph Page, and/or Section
Appendix A	Replaced in its entirety.

Encl as stated
Replaced pages of the specifications as indicated in Part I.

APPENDIX A

GEOTECHNICAL BORING LOGS AND LAB DATA

Boring Designation MHSPT-04-19

DRILLING LOG	DIVISION	INSTALLATION	SHEET
	South Atlantic Division	Mobile Harbor AL	1 OF 1 SHEETS

1. PROJECT: Mobile Harbor Borings		9. COORDINATE SYSTEM: State Plane - Alabama West	HORIZONTAL: NAD83 / VERTICAL: MLLW
		10. SIZE AND TYPE OF BIT: 4" Fishtail Upward Discharge	
2. HOLE NUMBER: MHSPT-04-19	LOCATION COORDINATES: N 90965.907 E 1797776.632	11. MANUFACTURER'S DESIGNATION OF DRILL: CME-750	
3. DRILLING AGENCY: Corps of Engineers - CESAS		12. TOTAL SAMPLES	DISTURBED: 18 / UNDISTURBED: 0
4. NAME OF DRILLER: Joe Bowerman		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG FROM VERTICAL: --- / BEARING	14. ELEVATION GROUND WATER: See Remarks	
		15. DATE BORING	STARTED: 9/6/20 / COMPLETED: 9/6/20
6. THICKNESS OF OVERBURDEN: >27'		16. ELEVATION TOP OF BORING: -33.84'	
7. DEPTH DRILLED INTO ROCK		17. TOTAL CORE RECOVERY FOR BORING: N/A	
8. TOTAL DEPTH OF BORING: 27'		18. SIGNATURE AND TITLE OF INSPECTOR: Jose Santiago, Geologist	

ELEV	DEPTH	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	RQD %	REMARKS	Blows/0.5 ft	N-Value
-34.8	1.0		SILTY SAND (SM), dark gray, fine to medium grained, few shells.	100	S1		USCS	2 5 5	10
			POORLY GRADED SAND (SP), light gray, fine to medium grained, few shells.	67	S2			6 8 7	15
				100	S3			1 3 3	6
				100	S4			4 2 2	4
				100	S5			0 0 1	1
-42.3	8.5		Dark gray, few wood.	100	S6			0 1 0	1
			CLAYEY SAND (SC), dark gray, fine to medium grained.	100	S7			0 1 0	1
				100	S8			0 1 0	1
				100	S9			1 1 1	2
-48.8	15.0			100	S10			0 1 2	3
			POORLY GRADED SAND (SP), gray, fine to medium grained, few silt, few wood.	100	S11			1 0 2	2
				100	S12			2 2 4	6
				100	S13			2 5 6	11
				100	S14			5 7 10	17
				100	S15			4 7 10	17
				100	S16			7 6 11	17
				100	S17			7 4 3	7
-60.5	26.7			20	S18			1 0 8	8
-60.8	27.0		SILTY SAND (SM), dark green, fine to medium grained.						

BOTTOM OF BOREHOLE AT 27.0 ft

DRILLING LOG

DIVISION: South Atlantic Division

INSTALLATION: Mobile Harbor AL

SHEET 1 OF 1 SHEETS

1. PROJECT: Mobile Harbor Borings

9. COORDINATE SYSTEM: State Plane - Alabama West | HORIZONTAL: NAD83 | VERTICAL: MLLW

10. SIZE AND TYPE OF BIT: 4" Fishtail Upward Discharge

2. HOLE NUMBER: MHSPT-05-19 | LOCATION COORDINATES: N 92371.489 E 1798639.299

11. MANUFACTURER'S DESIGNATION OF DRILL: CME-750

3. DRILLING AGENCY: Corps of Engineers - CESAS

12. TOTAL SAMPLES | DISTURBED: 16 | UNDISTURBED: 0

4. NAME OF DRILLER: Joe Bowerman

13. TOTAL NUMBER CORE BOXES: 0

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED | DEG FROM VERTICAL: --- | BEARING:

14. ELEVATION GROUND WATER: See Remarks

15. DATE BORING | STARTED: 9/7/20 | COMPLETED: 9/7/20

6. THICKNESS OF OVERBURDEN: >24'

16. ELEVATION TOP OF BORING: -35.5'

7. DEPTH DRILLED INTO ROCK:

17. TOTAL CORE RECOVERY FOR BORING: N/A

8. TOTAL DEPTH OF BORING: 24'

18. SIGNATURE AND TITLE OF INSPECTOR: Jose Santiago, Geologist

ELEV	DEPTH	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	RQD %	REMARKS	Blows/ 0.5 ft	N-Value
			POORLY GRADED SAND (SP), pale gray and dark brown, fine to medium grained, few shells.	40	S1		USCS	0 0 0	0
			Light gray.	93	S2		S-2 was divided into two jars (A 1.5-2.1 and B 2.1-3.0).	1 1 2	3
-39.5	4.0			100	S3			1 2 5	7
			SILTY SAND (SM), dark gray, fine to medium grained.	100	S4			8 8 13	21
-41.5	6.0								
			POORLY GRADED SAND (SP), light gray, fine to medium grained.	100	S5			1 1 1	2
				100	S6			4 5 9	14
				100	S7			6 3 2	5
-46.0	10.5		Some wood.						
			SANDY CLAY (CL), dark gray.	100	S8			1 1 1	2
				100	S9			0 0 0	0
				100	S10			0 1 0	1
-52.0	16.5			100	S11			0 0 0	0
			CLAY (CH), dark gray, high plasticity.	100	S12			0 1 2	3
				100	S13			0 0 1	1
				100	S14			0 0 0	0
				100	S15			1 2 2	4
-59.5	24.0			100	S16			0 1 1	2

BOTTOM OF BOREHOLE AT 24.0 ft

Notes:

1. Soils visually field classified in accordance with the Unified Soil Classification System.
2. N-Value: Total blows over last 1.0 foot of 1.5-foot driven interval, unless otherwise indicated, using a 1 3/8-inch ID splitspoon with 140-pound hammer falling 30 inches.
3. The CME-750 drilling rig utilizes an automatic trip hammer.
4. Undisturbed sampling with 3" by 30" Shelby tube, mechanically pushed with CME-750.
5. Component Percentages: Trace: 0 to 5%, Few: 5 to 10%, Little: 15 to 25%, Some 30 to 45%, With 50 to 100%.
6. MLLW was calculated from measuring barge deck to mud line, then subtracting barge deck to water and closest observation station tide reading.

Replaced by Amendment No. W9127824B0002-0001

DRILLING LOG

DIVISION: South Atlantic Division

INSTALLATION: Mobile Harbor AL

SHEET 1 OF 1 SHEETS

1. PROJECT: Mobile Harbor Borings

2. HOLE NUMBER: MHSPT-06-19

LOCATION COORDINATES: N 94149.489 E 1798828.672

3. DRILLING AGENCY: Corps of Engineers - CESAS

4. NAME OF DRILLER: Joe Bowerman

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED; DEG FROM VERTICAL: ---; BEARING:

6. THICKNESS OF OVERBURDEN: >27.5'

7. DEPTH DRILLED INTO ROCK:

8. TOTAL DEPTH OF BORING: 27.5'

9. COORDINATE SYSTEM: State Plane - Alabama West; HORIZONTAL: NAD83; VERTICAL: MLLW

10. SIZE AND TYPE OF BIT: 4" Fishtail Upward Discharge

11. MANUFACTURER'S DESIGNATION OF DRILL: CME-750

12. TOTAL SAMPLES: DISTURBED 18; UNDISTURBED 0

13. TOTAL NUMBER CORE BOXES: 0

14. ELEVATION GROUND WATER: See Remarks

15. DATE BORING: STARTED 9/8/20; COMPLETED 9/8/20

16. ELEVATION TOP OF BORING: -32.5'

17. TOTAL CORE RECOVERY FOR BORING: N/A

18. SIGNATURE AND TITLE OF INSPECTOR: April Kelly, Geologist

ELEV	DEPTH	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	RQD %	REMARKS	Blows/ 0.5 ft	N-Value
-32.7	0.2		SILTY SAND (SM), grayish green to, fine grained, saturated, few silt, trace shells.	100	S1		USCS	3, 4, 3	7
			POORLY GRADED SAND (SP), light brown and dark gray, fine grained, trace silt. Light grayish brown.	87	S2			2, 2, 3	5
				73	S3			5, 5, 4	9
-38.1	5.6		Fine to medium grained.	100	S4			3, 1, 1	2
			SILTY SAND (SM), dark gray, fine grained, little silt, trace wood, few mica. Few silt.	87	S6			0, 1, 3	4
-41.5	9.0			100	S7			2, 2, 2	4
-43.0	10.5		POORLY GRADED SAND (SP), light brown and dark gray, fine grained, trace silt, few mica.	100	S8			0, 0, 1	1
			SANDY CLAY (CL), dark gray, medium plasticity.	93	S9			1, 0, 0	0
-46.4	13.9			100	S10			0, 0, 0	0
			CLAY (CH), dark grayish green, high plasticity, trace shells, trace fine sand.	100	S11			0, 1, 1	2
				100	S12			0, 1, 2	3
			Trace wood.	100	S13			1, 1, 2	3
				100	S14			1, 2, 2	4
				100	S15			0, 1, 2	3
-55.0	22.5		Little wood.	100	S16			1, 1, 2	3
			SANDY CLAY (CL), dark gray, trace wood, few fine sand.	100	S17			0, 1, 2	3
				100	S18			1, 2, 3	5
			Dark grayish green.	100	S19			3, 3, 4, 5	7
-60.0	27.5								

BOTTOM OF BOREHOLE AT 27.5 ft

Replaced by Amendment No. W9127824B0002-0001

Boring Designation MHSPT-07-19

DRILLING LOG	DIVISION	INSTALLATION	SHEET
	South Atlantic Division	Mobile Harbor AL	1 OF 1 SHEETS

1. PROJECT: Mobile Harbor Borings		9. COORDINATE SYSTEM: State Plane - Alabama West	HORIZONTAL: NAD83 / VERTICAL: MLLW
		10. SIZE AND TYPE OF BIT: 4" Fishtail Upward Discharge	
2. HOLE NUMBER: MHSPT-07-19	LOCATION COORDINATES: N 96149.494 E 1798543.851	11. MANUFACTURER'S DESIGNATION OF DRILL: CME-750	
3. DRILLING AGENCY: Corps of Engineers - CESAS		12. TOTAL SAMPLES	DISTURBED: 13 / UNDISTURBED: 0
4. NAME OF DRILLER: Joe Bowerman		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG FROM VERTICAL: --- / BEARING	14. ELEVATION GROUND WATER: See Remarks	
		15. DATE BORING	STARTED: 9/9/20 / COMPLETED: 9/9/20
6. THICKNESS OF OVERBURDEN: >20'		16. ELEVATION TOP OF BORING: -39.47'	
7. DEPTH DRILLED INTO ROCK		17. TOTAL CORE RECOVERY FOR BORING: N/A	
8. TOTAL DEPTH OF BORING: 20'		18. SIGNATURE AND TITLE OF INSPECTOR: April Kelly, Geologist	

ELEV	DEPTH	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	RQD %	REMARKS	Blows/ 0.5 ft	N-Value
-40.2	0.7		POORLY GRADED SAND (SP), gray, fine grained, trace silt, trace shells.	67	S1		USCS	0 0 0	0
-41.0	1.5		SILTY SAND (SM), dark green, fine grained, little silt, trace shells.	67	S3			0 0 0	0
-42.5	3.0		SANDY SILT (ML), dark gray, medium plasticity, rapid dilatancy, some fine sand, trace shells.	100	S4			0 0 0	0
			SILT (MH), high plasticity, trace fine sand.	100	S5			0 0 0	0
				100	S6			0 0 0	0
				100	S7			0 0 0	0
				100	S8			0 0 0	0
				7	S9			0 0 0	0
			Trace wood.	100	S10			0 0 0	0
				100	S11			0 0 0	0
-55.0	15.5								
-55.8	16.3		SILTY SAND (SM), dark gray, fine grained, few silt, trace wood.	100	S12			0 0 2	2
			SANDY PEAT (OL), dark gray and dark brown, some fine sand, few wood.	53	S15			2 0 0	0
-58.8	19.3			100	S16			0 1 1	2
-59.5	20.0		CLAY (CH), dark grayish green, high plasticity, trace wood, trace fine sand.					1	

BOTTOM OF BOREHOLE AT 20.0 ft

Notes:

1. Soils visually field classified in accordance with the Unified Soil Classification System.
2. N-Value: Total blows over last 1.0 foot of 1.5-foot driven interval, unless otherwise indicated, using a 1 3/8-inch ID splitspoon with 140-pound hammer falling 30 inches.
3. The CME-750 drilling rig utilizes an automatic trip hammer.
4. Undisturbed sampling with 3" by 30" Shelby tube, mechanically pushed with CME-750.
5. Component Percentages: Trace: 0 to 5%, Few: 5 to 10%, Little: 15 to 25%, Some 30 to 45%, With 50 to 100%.
6. MLLW was calculated from measuring barge deck to mud line, then subtracting barge deck to water and closest observation station tide reading.

Replaced by Amendment No. W9127824B0002-0001

DRILLING LOG

DIVISION: South Atlantic Division

INSTALLATION: Mobile Harbor AL

SHEET 1 OF 1 SHEETS

1. PROJECT: Mobile Harbor Borings

9. COORDINATE SYSTEM: State Plane - Alabama West | HORIZONTAL: NAD83 | VERTICAL: MLLW

10. SIZE AND TYPE OF BIT: 4" Fishtail Upward Discharge

2. HOLE NUMBER: MHSPT-08-19 | LOCATION COORDINATES: N 98053.888 E 1799368.166

11. MANUFACTURER'S DESIGNATION OF DRILL: CME-750

3. DRILLING AGENCY: Corps of Engineers - CESAS

12. TOTAL SAMPLES | DISTURBED: 16 | UNDISTURBED: 0

4. NAME OF DRILLER: Joe Bowerman

13. TOTAL NUMBER CORE BOXES: 0

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED | DEG FROM VERTICAL: --- | BEARING:

14. ELEVATION GROUND WATER: See Remarks

15. DATE BORING | STARTED: 9/10/20 | COMPLETED: 9/10/20

6. THICKNESS OF OVERBURDEN: >24'

16. ELEVATION TOP OF BORING: -35.63'

7. DEPTH DRILLED INTO ROCK:

17. TOTAL CORE RECOVERY FOR BORING: N/A

8. TOTAL DEPTH OF BORING: 24'

18. SIGNATURE AND TITLE OF INSPECTOR: April Kelly, Geologist

ELEV	DEPTH	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	RQD %	REMARKS	Blows/ 0.5 ft	N-Value
			SILTY SAND (SM), dark gray, fine grained, little silt, trace shells.	100	S1		USCS	1 2 0	2
			SAND, gray, fine grained, few silt.	100	S3			0 0 1	1
			Organic odor.	100	S4			0 0 0	0
				73	S5			0 1 0	1
			Fine to medium grained.	100	S6			0 1 2	3
				53	S7			3 2 2	4
-46.1	10.5		Trace shells, organic odor.	100	S8			1 2 2	4
			POORLY GRADED SAND (SP), gray, fine to medium grained, trace silt, organic odor.	100	S9			2 3 2	5
				100	S10			3 2 2	4
				100	S11			3 2 2	4
			Trace wood.	100	S12			3 2 2	4
				100	S13			1 1 2	3
				100	S14			1 0 2	2
			Light gray to tan.	100	S15			2 1 0	1
				100	S16			2 0 2	2
-59.6	24.0			100	S17			1 0 1	1

BOTTOM OF BOREHOLE AT 24.0 ft

Notes:

1. Soils visually field classified in accordance with the Unified Soil Classification System.
2. N-Value: Total blows over last 1.0 foot of 1.5-foot driven interval, unless otherwise indicated, using a 1 3/8-inch ID splitspoon with 140-pound hammer falling 30 inches.
3. The CME-750 drilling rig utilizes an automatic trip hammer.
4. Undisturbed sampling with 3" by 30" Shelby tube, mechanically pushed with CME-750.
5. Component Percentages: Trace: 0 to 5%, Few: 5 to 10%, Little: 15 to 25%, Some 30 to 45%, With 50 to 100%.
6. MLLW was calculated from measuring barge deck to mud line, then subtracting barge deck to water and closest observation station tide reading.

Boring Designation MHSPT-09-19

DRILLING LOG	DIVISION: South Atlantic Division	INSTALLATION: Mobile Harbor AL	SHEET 1 OF 1 SHEETS

1. PROJECT: Mobile Harbor Borings		9. COORDINATE SYSTEM: State Plane - Alabama West	HORIZONTAL: NAD83 / VERTICAL: MLLW
		10. SIZE AND TYPE OF BIT: 4" Fishtail Upward Discharge	
2. HOLE NUMBER: MHSPT-09-19 / LOCATION COORDINATES: N 100364.582 E 1798938.319		11. MANUFACTURER'S DESIGNATION OF DRILL: CME-750	
3. DRILLING AGENCY: Corps of Engineers - CESAS		12. TOTAL SAMPLES	DISTURBED: 21 / UNDISTURBED: 0
4. NAME OF DRILLER: Joe Bowerman		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED / DEG FROM VERTICAL: --- / BEARING		14. ELEVATION GROUND WATER: See Remarks	
		15. DATE BORING	STARTED: 9/11/20 / COMPLETED: 9/11/20
6. THICKNESS OF OVERBURDEN: >32'		16. ELEVATION TOP OF BORING: -27.98'	
7. DEPTH DRILLED INTO ROCK		17. TOTAL CORE RECOVERY FOR BORING: N/A	
8. TOTAL DEPTH OF BORING: 32'		18. SIGNATURE AND TITLE OF INSPECTOR: April Kelly, Geologist	

ELEV	DEPTH	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	RQD %	REMARKS	Blows/ 0.5 ft	N-Value
			SANDY SILT (ML), dark greenish gray, medium plasticity, little fine sand, trace shells.	100	S1		USCS	0 0 0	0
				87	S2			0 0 0	0
			Organic odor.	100	S3			0 0 0	0
				100	S4			0 0 0	0
-35.5	7.5		Some fine sand.	80	S5			0 0 0	0
-37.0	9.0		SILTY SAND (SM), dark gray, fine grained, little silt, trace shells.	100	S6			0 0 0	0
			SILTY SAND (SP-SM), dark gray, few silt, trace shells.	60	S7			0 0 1	1
				73	S8			0 1 2	3
				100	S9			1 1 2	3
				53	S10			0 1 1	2
-44.5	16.5			33	S11			0 0 0	0
-46.0	18.0		SANDY SILT (ML), dark blueish gray, medium plasticity, few fine sand, trace shells.	100	S12			1 1 1	2
			ELASTIC SILT (MH), high plasticity, trace wood, trace fine sand.	33	S13			3 2 2	4
				100	S14			1 2 1	3
				100	S15			0 0 0	0
				100	S16			1 1 1	2
				100	S17			1 2 1	3
-54.2	26.2			80	S18			0 2 2	4
-56.5	28.5		SANDY PEAT (OL), dark gray and dark brown, little fine sand, little wood.	20	S20			0 3 2	5
			ELASTIC SILT (MH), dark grayish green, high plasticity, trace wood, trace fine sand.	100	S21			2 1 3	4
-60.0	32.0			100	S22			1 2 3 4	5

BOTTOM OF BOREHOLE AT 32.0 ft

DRILLING LOG

DIVISION: South Atlantic Division

INSTALLATION: Mobile Harbor AL

SHEET 1 OF 1 SHEETS

1. PROJECT: Mobile Harbor Borings

9. COORDINATE SYSTEM: State Plane - Alabama West | HORIZONTAL: NAD83 | VERTICAL: MLLW

10. SIZE AND TYPE OF BIT: 4" Fishtail Upward Discharge

2. HOLE NUMBER: MHSPT-10-19 | LOCATION COORDINATES: N 101921.727 E 1799799.836

11. MANUFACTURER'S DESIGNATION OF DRILL: CME-750

3. DRILLING AGENCY: Corps of Engineers - CESAS

12. TOTAL SAMPLES: DISTURBED 11 | UNDISTURBED 0

4. NAME OF DRILLER: Joe Bowerman

13. TOTAL NUMBER CORE BOXES: 0

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED | DEG FROM VERTICAL: --- | BEARING:

14. ELEVATION GROUND WATER: See Remarks

15. DATE BORING: STARTED 9/12/20 | COMPLETED 9/12/20

6. THICKNESS OF OVERBURDEN: >16.5'

16. ELEVATION TOP OF BORING: -41.65'

7. DEPTH DRILLED INTO ROCK:

17. TOTAL CORE RECOVERY FOR BORING: N/A

8. TOTAL DEPTH OF BORING: 16.5'

18. SIGNATURE AND TITLE OF INSPECTOR: April Kelly, Geologist

ELEV	DEPTH	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	RQD %	REMARKS	Blows/ 0.5 ft	N-Value
			SANDY SILT (ML), dark gray, low plasticity, little fine sand, trace shells.	33	S1		USCS	0 0 0	0
			Trace fine sand, no shells.	87	S2			0 0 0	0
				47	S3			0 0 0	0
-47.7	6.0			100	S4			0 0 0	0
-49.2	7.5		SILTY SAND (SM), dark gray, fine grained, few silt.	47	S5			2 0 0	0
			SANDY SILT (ML), dark gray, medium plasticity, few fine sand.	100	S6			0 0 0	0
				100	S7			0 0 0	0
			Trace wood.	100	S8			0 0 0	0
			Low plasticity, some fine sand. Dark gray and dark brown, few fine sand, few wood.	100	S9			0 1 2	3
-56.7	15.0			100	S10			1 2 1	3
-57.7	16.0		ELASTIC SILT (MH), dark grayish green, high plasticity, trace wood, trace fine sand.	100	S11			0 2 2	4

BOTTOM OF BOREHOLE AT 16.5 ft

Notes:

1. Soils visually field classified in accordance with the Unified Soil Classification System.
2. N-Value: Total blows over last 1.0 foot of 1.5-foot driven interval, unless otherwise indicated, using a 1 3/8-inch ID splitspoon with 140-pound hammer falling 30 inches.
3. The CME-750 drilling rig utilizes an automatic trip hammer.
4. Undisturbed sampling with 3" by 30" Shelby tube, mechanically pushed with CME-750.
5. Component Percentages: Trace: 0 to 5%, Few: 5 to 10%, Little: 15 to 25%, Some 30 to 45%, With 50 to 100%.
6. MLLW was calculated from measuring barge deck to mud line, then subtracting barge deck to water and closest observation station tide reading.

Replaced by Amendment No. W9127824B0002-0001

Boring Designation MHSPT-11-19

DRILLING LOG	DIVISION: South Atlantic Division	INSTALLATION: Mobile Harbor AL	SHEET 1 OF 1 SHEETS

1. PROJECT: Mobile Harbor Borings		9. COORDINATE SYSTEM: State Plane - Alabama West	HORIZONTAL: NAD83 / VERTICAL: MLLW
		10. SIZE AND TYPE OF BIT: 4" Fishtail Upward Discharge	
2. HOLE NUMBER: MHSPT-11-19	LOCATION COORDINATES: N 104081.253 E 1799422.912	11. MANUFACTURER'S DESIGNATION OF DRILL: CME-750	
3. DRILLING AGENCY: Corps of Engineers - CESAS		12. TOTAL SAMPLES	DISTURBED: 24 / UNDISTURBED: 0
4. NAME OF DRILLER: Joe Bowerman		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG FROM VERTICAL: --- / BEARING	14. ELEVATION GROUND WATER: See Remarks	
		15. DATE BORING	STARTED: 9/19/20 / COMPLETED: 9/19/20
6. THICKNESS OF OVERBURDEN: >34.5'		16. ELEVATION TOP OF BORING: -28.6'	
7. DEPTH DRILLED INTO ROCK		17. TOTAL CORE RECOVERY FOR BORING: N/A	
8. TOTAL DEPTH OF BORING: 34.5'		18. SIGNATURE AND TITLE OF INSPECTOR: Adam Tew, Geologist	

ELEV	DEPTH	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	RQD %	REMARKS	Blows/ 0.5 ft	N-Value
			SANDY SILT (ML), dark gray, very soft, low plasticity, few fine sand, trace shells.	100	S1		USCS	0 0 0	0
				100	S2		hole drilled using rotary spade bit and water	1 0 1	1
				93	S3		minimal fluid return throughout drilling	0 0 0	0
				100	S4			0 0 0	0
				47	S5			2 0 0	0
				100	S6			0 0 0	0
-38.6	10.0			100	S7			0 0 0	0
			SILTY SAND (SM), light gray, fine grained, wet, very loose, some silt.	100	S8			1 1 1	2
				80	S9			0 2 2	4
				100	S10			1 2 1	3
			SAND, light brownish gray, fine to medium grained, very loose, little silt.	87	S11			0 0 1	1
-46.1	17.5			87	S12			0 1 0	1
			CLAY (CH), greenish gray, high plasticity, no dilatancy.	33	17.5			0 0 2	0
				93	S13			2 2 2	4
				47	S14			0 1 2	3
				100	S15			1 1 2	3
			Grayish brown, trace wood.	100	S16			0 0 2	2
				80	S17			0 2 1	3
				100	S18			0 2 1	3
-56.1	27.5			100	S19			1 2 2	4
			SANDY CLAY (CL), grayish brown, wet, medium plasticity, some fine to medium sand. Few fine sand.	100	S20			0 1 2	3
				100	S21			1 2 2	4
				100	S22			0 1 2	3
-63.1	34.5			100	S23			1 1 3	4

SAS FORM 1836-A FEB 08

BOTTOM OF BOREHOLE AT 34.5 ft

Boring Designation MHSPT-11-19 SHEET 1 of 1

Replaced by Amendment No. W9127824B0002-0001

Boring Designation MHSPT-12-19

DRILLING LOG

DIVISION: South Atlantic Division

INSTALLATION: Mobile Harbor AL

SHEET 1 OF 2 SHEETS

1. PROJECT: Mobile Harbor Borings

9. COORDINATE SYSTEM: State Plane - Alabama West | HORIZONTAL: NAD83 | VERTICAL: MLLW

10. SIZE AND TYPE OF BIT: 4" Fishtail Upward Discharge

2. HOLE NUMBER: MHSPT-12-19 | LOCATION COORDINATES: N 105901.235 E 1800496.571

11. MANUFACTURER'S DESIGNATION OF DRILL: CME-750

3. DRILLING AGENCY: Corps of Engineers - CESAS

12. TOTAL SAMPLES | DISTURBED: 27 | UNDISTURBED: 0

4. NAME OF DRILLER: Joe Bowerman

13. TOTAL NUMBER CORE BOXES: 0

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED | DEG FROM VERTICAL: --- | BEARING:

14. ELEVATION GROUND WATER: See Remarks

15. DATE BORING | STARTED: 9/26/20 | COMPLETED: 9/26/20

6. THICKNESS OF OVERBURDEN: >40.5'

16. ELEVATION TOP OF BORING: -20.26'

7. DEPTH DRILLED INTO ROCK:

17. TOTAL CORE RECOVERY FOR BORING: N/A

8. TOTAL DEPTH OF BORING: 40.5'

18. SIGNATURE AND TITLE OF INSPECTOR: Michael Loveland, Geologist

ELEV	DEPTH	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	RQD %	REMARKS	Blows/ 0.5 ft	N-Value
			CLAYEY ELASTIC SILT (MH), greenish gray, saturated, high plasticity, no dilatancy, trace fine sand, trace shells.	73	S1		USCS	0 0 0	0
				60	S2			0 0 0	0
				100	S3			0 0 0	0
				100	S4			0 0 0	0
				100	S5			0 0 0	0
				100	S6			0 0 0	0
				100	S7			0 0 0	0
				100	S8			0 0 0	0
				100	S9			0 0 0	0
				100	S10			0 0 0	0
				80	S11			0 0 0	0
			Trace silty sand (SM) seams.	80	S12			0 0 0	0
				100	S13			0 0 0	0
-41.3	21.0			53	S14			0 0 0	0
			SANDY SILT (ML), greenish gray, saturated, very soft, non plastic, trace shells.	40	S15			0 0 0	0
-44.3	24.0			20	S16			0 0 0	0
			SAND (SM), greenish gray, fine to medium grained, saturated, little silt, trace shells.	47	S17			0 0 0	0
				93	S18			0 1 0	1
			Interbedded silt.	73	S19			0 0 0	0
-48.8	28.5								
-50.3	30.0		POORLY GRADED SAND (SP), gray, poorly graded, fine to medium grained, saturated, very loose, trace silt, trace shells.	53	S20			0 0 0	0
			CLAY (CH), green and gray, moist, very soft, high plasticity, trace sp nodules.	100	S21			0 0 0	0
-52.7	32.4			100	S22			0 0 1	1
			CLAYEY ELASTIC SILT (MH), blueish green, moist, very soft to stiff, trace fine sand.	100	S23			1 3 2 3 3	5

DRILLING LOG (Cont Sheet)

INSTALLATION	SHEET
Mobile Harbor AL	2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM	HORIZONTAL	VERTICAL
Mobile Harbor Borings	State Plane	NAD83	MLLW

LOCATION COORDINATES	ELEVATION TOP OF BORING
N 105901.235 E 1800496.571	-20.26'

ELEV	DEPTH	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	RQD %	REMARKS	Blows/ 0.5 ft	N-Value
-55.8	35.5			73	S24			4 6	10
			SILTY SAND (SM), green with yellowish brown, fine grained, wet, low plasticity, few clay.	100	S25			3 3 4	7
				100	S26			5 4 4	8
			Light gray, fine grained, saturated, few silt, With trace silt (ML) blue green seams.	100	S27			5 6 6	12
-60.8	40.5								

BOTTOM OF BOREHOLE AT 40.5 ft

Notes:

1. Soils visually field classified in accordance with the Unified Soil Classification System.
2. N-Value: Total blows over last 1.0 foot of 1.5-foot driven interval, unless otherwise indicated, using a 1 3/8-inch ID splitspoon with 140-pound hammer falling 30 inches.
3. The CME-750 drilling rig utilizes an automatic trip hammer.
4. Undisturbed sampling with 3" by 30" Shelby tube, mechanically pushed with CME-750.
5. Component Percentages: Trace: 0 to 5%, Few: 5 to 10%, Little: 15 to 25%, Some 30 to 45%, With 50 to 100%.
6. MLLW was calculated from measuring barge deck to mud line, then subtracting barge deck to water and closest observation station tide reading.

Boring Designation MHSPT-13-19

DRILLING LOG	DIVISION: South Atlantic Division	INSTALLATION: Mobile Harbor AL	SHEET 1 OF 1 SHEETS

1. PROJECT: Mobile Harbor Borings		9. COORDINATE SYSTEM: State Plane - Alabama West	HORIZONTAL: NAD83 / VERTICAL: MLLW
		10. SIZE AND TYPE OF BIT: 4" Fishtail Upward Discharge	
2. HOLE NUMBER: MHSPT-13-19	LOCATION COORDINATES: N 107831.342 E 1800095.395	11. MANUFACTURER'S DESIGNATION OF DRILL: CME-750	
3. DRILLING AGENCY: Corps of Engineers - CESAS		12. TOTAL SAMPLES	DISTURBED: 9 / UNDISTURBED: 0
4. NAME OF DRILLER: Joe Bowerman		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG FROM VERTICAL: --- / BEARING	14. ELEVATION GROUND WATER: See Remarks	
		15. DATE BORING	STARTED: 9/20/20 / COMPLETED: 9/20/20
6. THICKNESS OF OVERBURDEN: >34.5'		16. ELEVATION TOP OF BORING: -46.7'	
7. DEPTH DRILLED INTO ROCK		17. TOTAL CORE RECOVERY FOR BORING: N/A	
8. TOTAL DEPTH OF BORING: 34.5'		18. SIGNATURE AND TITLE OF INSPECTOR: Adam Tew, Geologist	

ELEV	DEPTH	LEGEND	FIELD CLASSIFICATION OF MATERIALS (Description)	% REC	Samp No.	RQD %	REMARKS	Blows/ 0.5 ft	N-Value
			SILT (ML), greenish brown, saturated, non plastic.	40	S1		USCS	0 0 0	0
			Dark gray.	73	S2		hole drilled using rotary spade bit and water	0 0 0	0
				73	S3		minimal fluid return throughout drilling	0 0 0	0
			Interbedded fine to medium sand.	100	S4			0 0 0	0
				100	S5			0 0 0	0
				100	S6			0 0 0	0
			Trace shell fragments, discontinue interbedded sand.	100	S7			0 0 0	0
-58.7	12.0		Gray, very soft, medium plasticity, some fine sand.	100	S8		WOR to 11.0 ft.	0 0 0	0
-60.2	13.5		SILTY SAND (SM), light gray, fine grained, saturated, some silt.	27	S9			0 0 2	2

0 5 10 15 20 25 30

SAS FORM 1836-A FEB 08

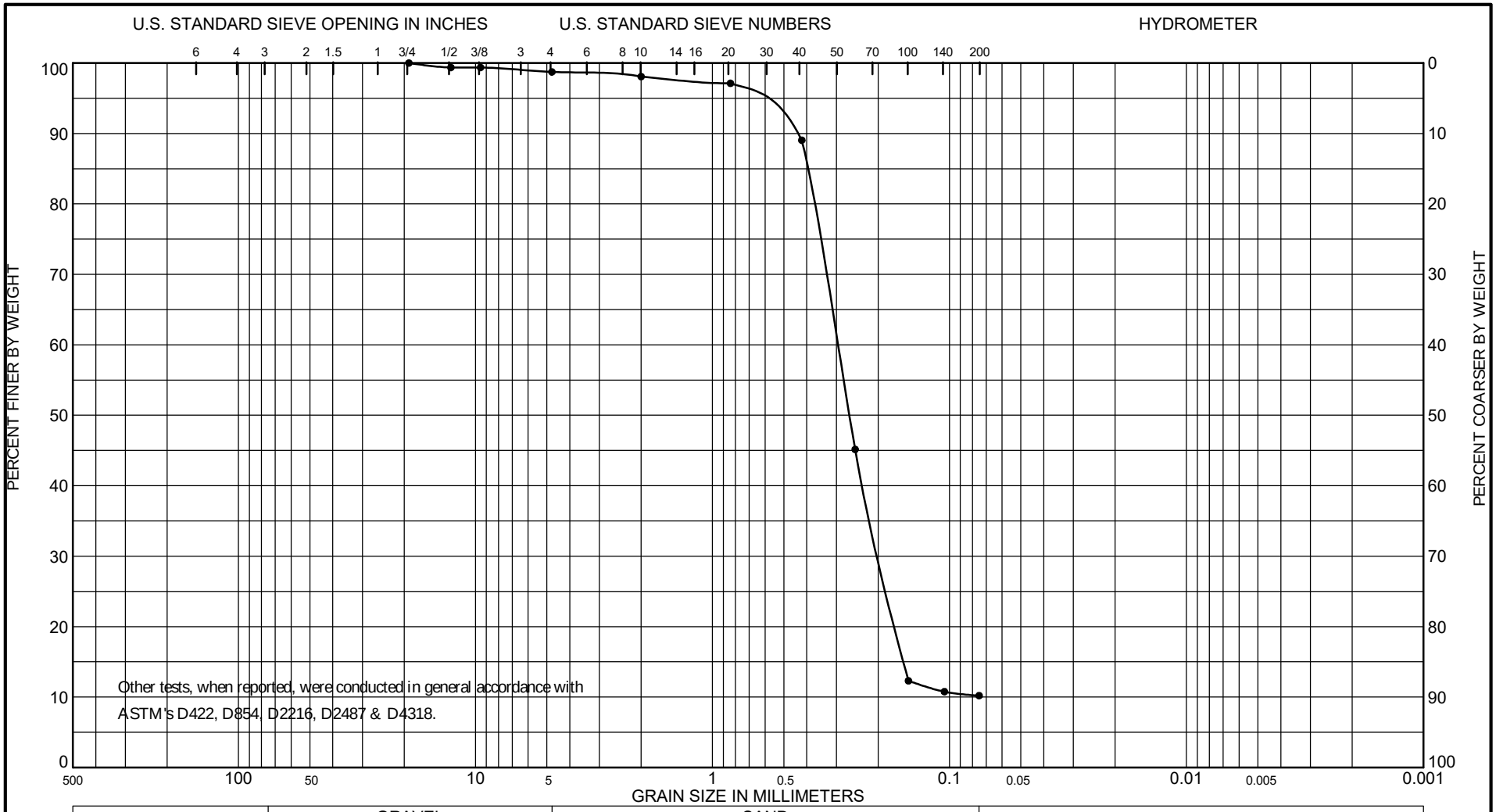
BOTTOM OF BOREHOLE AT 34.5 ft

Boring Designation MHSPT-13-19 SHEET 1 of 1

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-2A	1.5 to 3.0	Grayish Brown & Dark Gray, Poorly Graded Silty Sand (SP-SM),	27.0			
		with a trace of gravel.				

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15241

Hole No. MHSPT-05-19

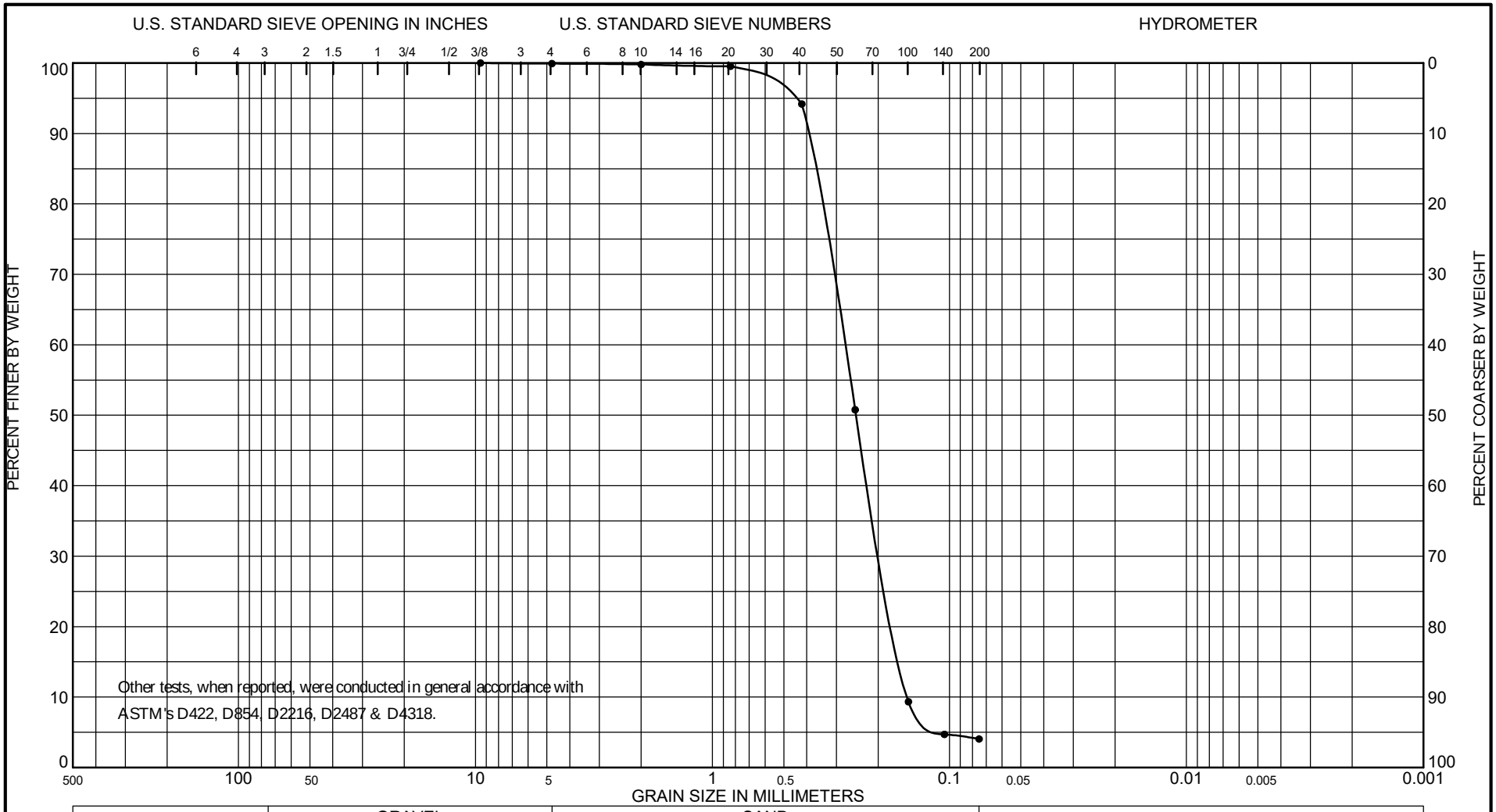
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-2B	1.5 to 3.0	Light Brownish Gray, Gray & Yellowish Brown, Poorly Graded Sand	23.1			
		(SP).				

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15242

Hole No. MHSPT-05-19

Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
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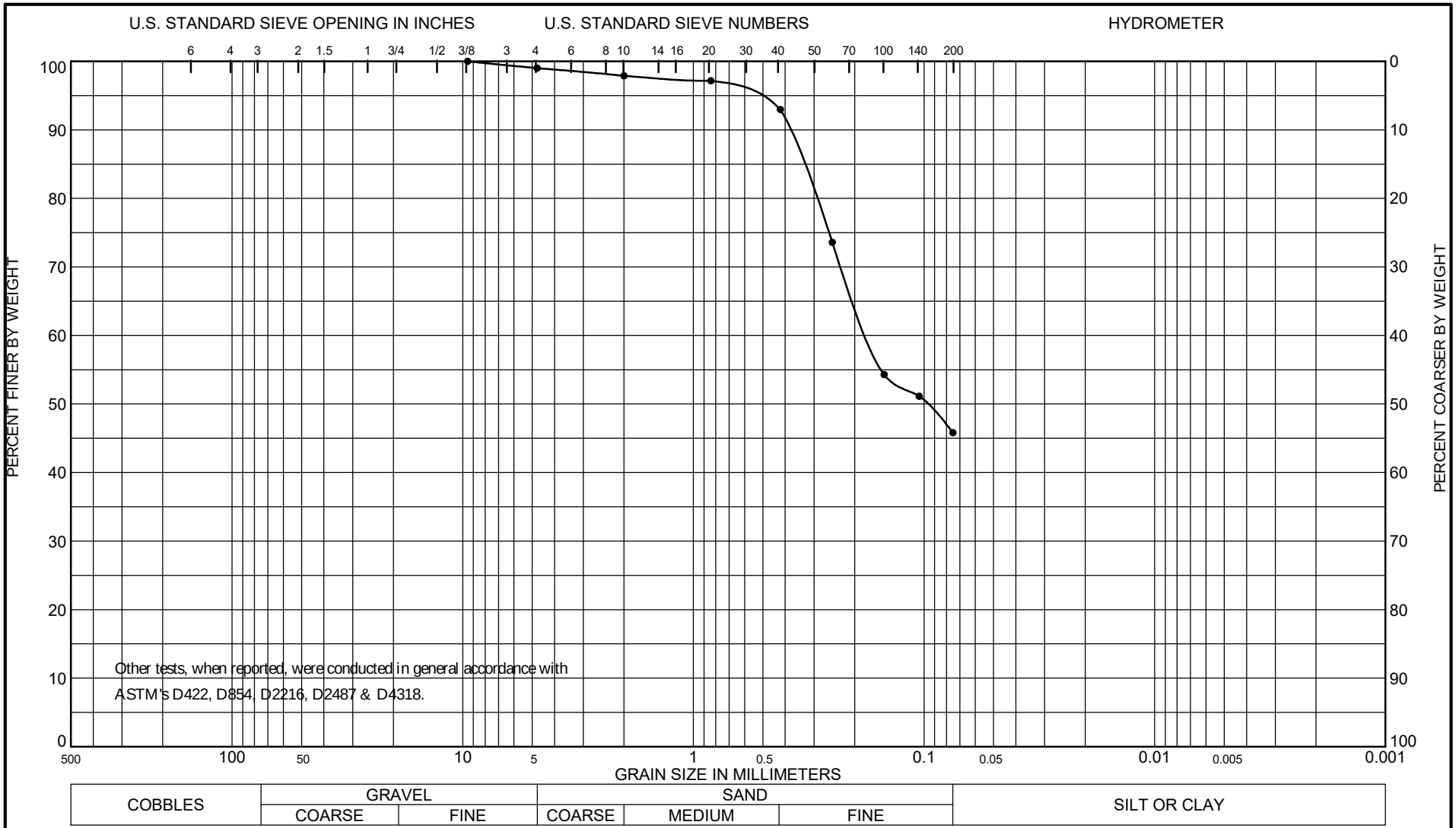

COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-4	4.5 to 6.0	Dark Gray, Grayish Brown & Yellowish Brown, (Visual) Clayey Sand (SC), with a trace of gravel.	38.5			

Project Mobile Harbor
Soil Testing Mobile, AL
Lab No. K5/15245
Hole No. MHSPT-05-19
Date 6/26/21

GRADATION CURVES

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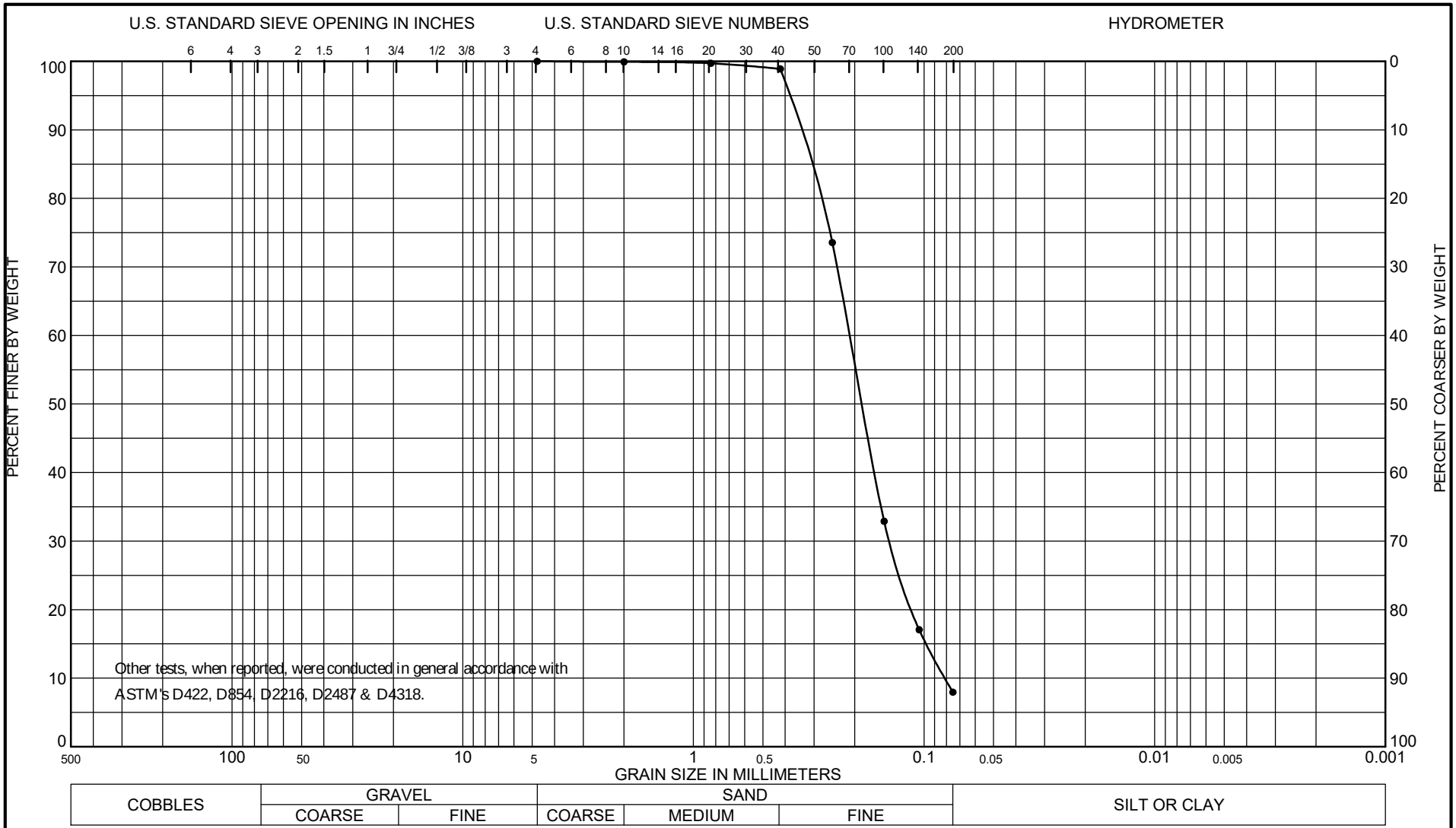
DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-6	7.5 to 9.0	Gray, Grayish Brown & Brown, Poorly Graded Silty Sand (SP-SM).	26.3			

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15247

Hole No. MHSPT-05-19

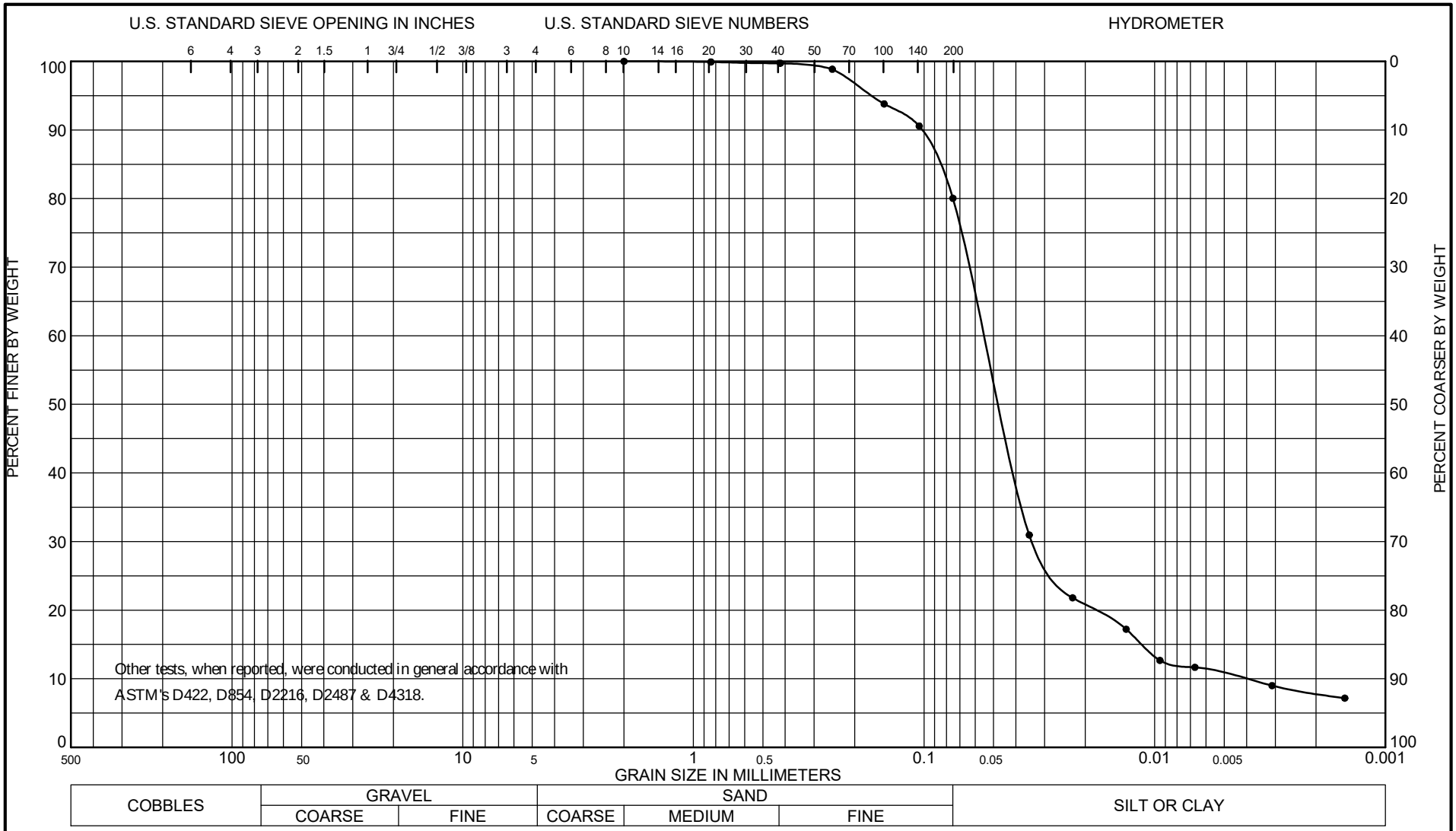
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-8	10.5 to 12.0	Dark Gray, Lean Clay (CL), with some sand.	24.3	35	23	12

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15249

Hole No. MHSPT-05-19

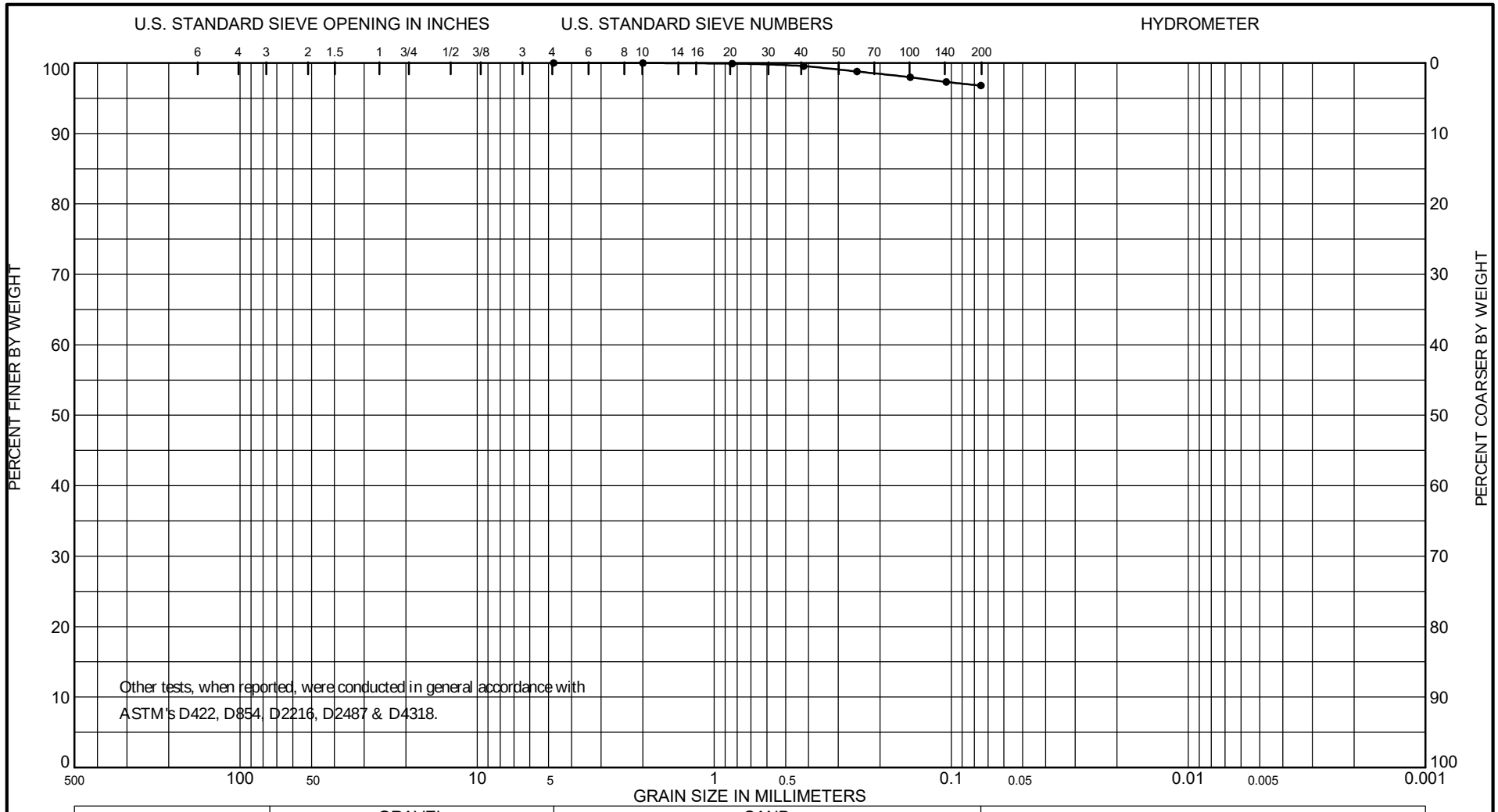
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-6	6.0 to 7.5	Dark Gray & Grayish Brown, Fat Clay (CH), with a trace of sand.	81.5	99	32	67

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15540

Hole No. MHSPT-07-19

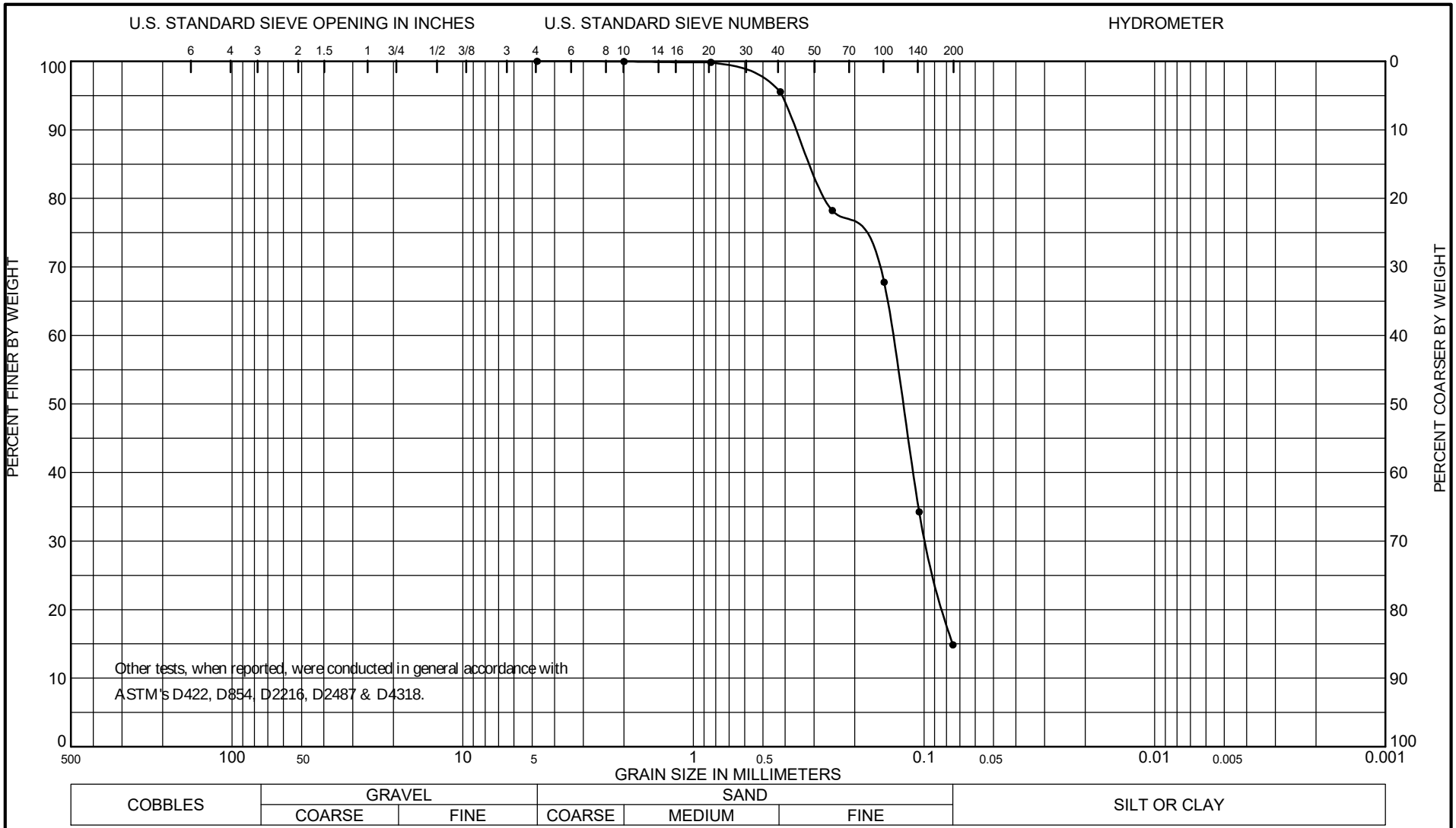
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-4	3.0 to 4.5	Dark Gray & Grayish Brown, Silty Sand (SM).	25.2			

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15555

Hole No. MHSPT-08-19

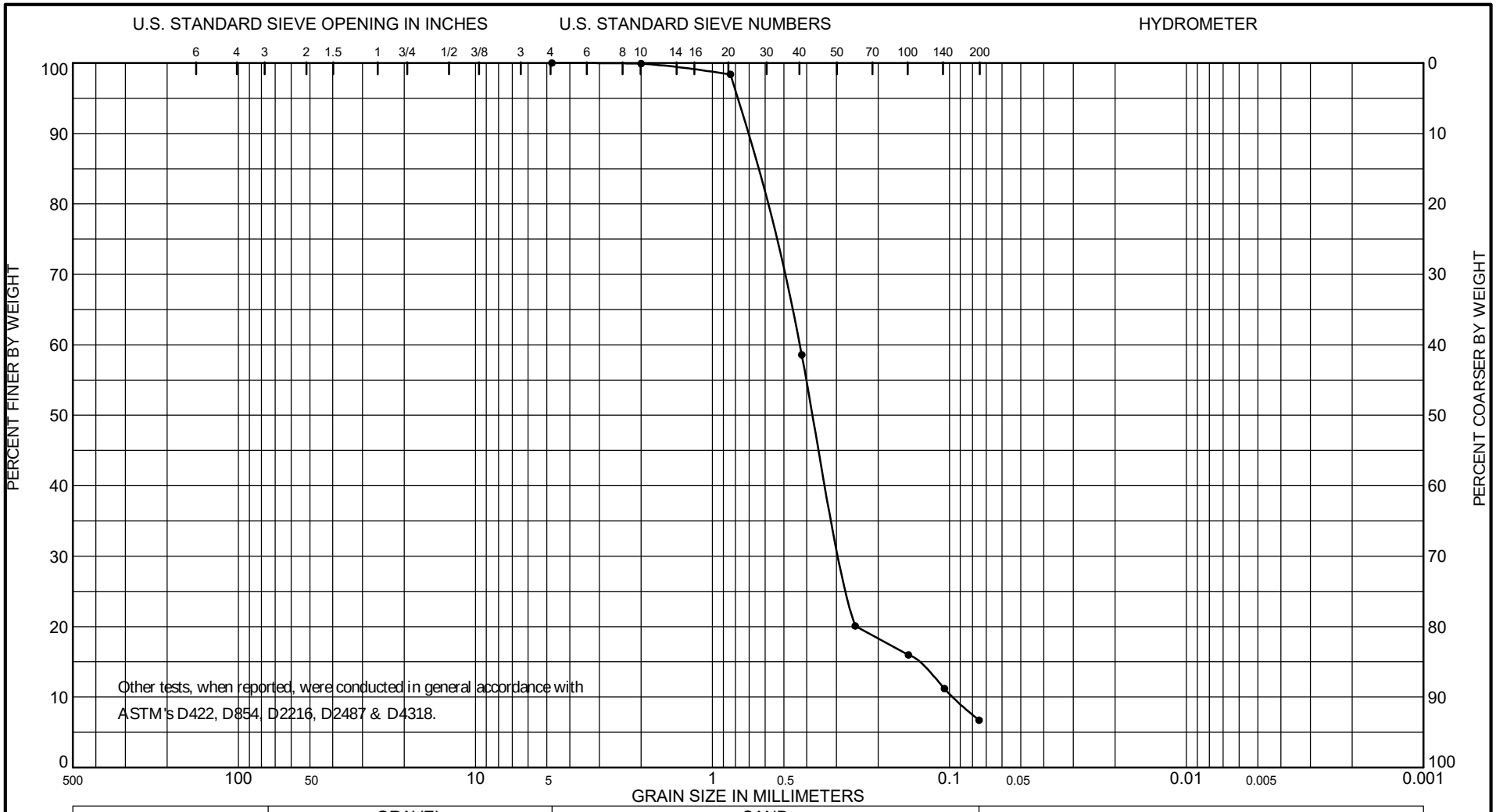
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-10	12.0 to 13.5	Gray & Grayish Brown, Poorly Graded Silty Sand (SP-SM).	17.3			

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15561

Hole No. MHSPT-08-19

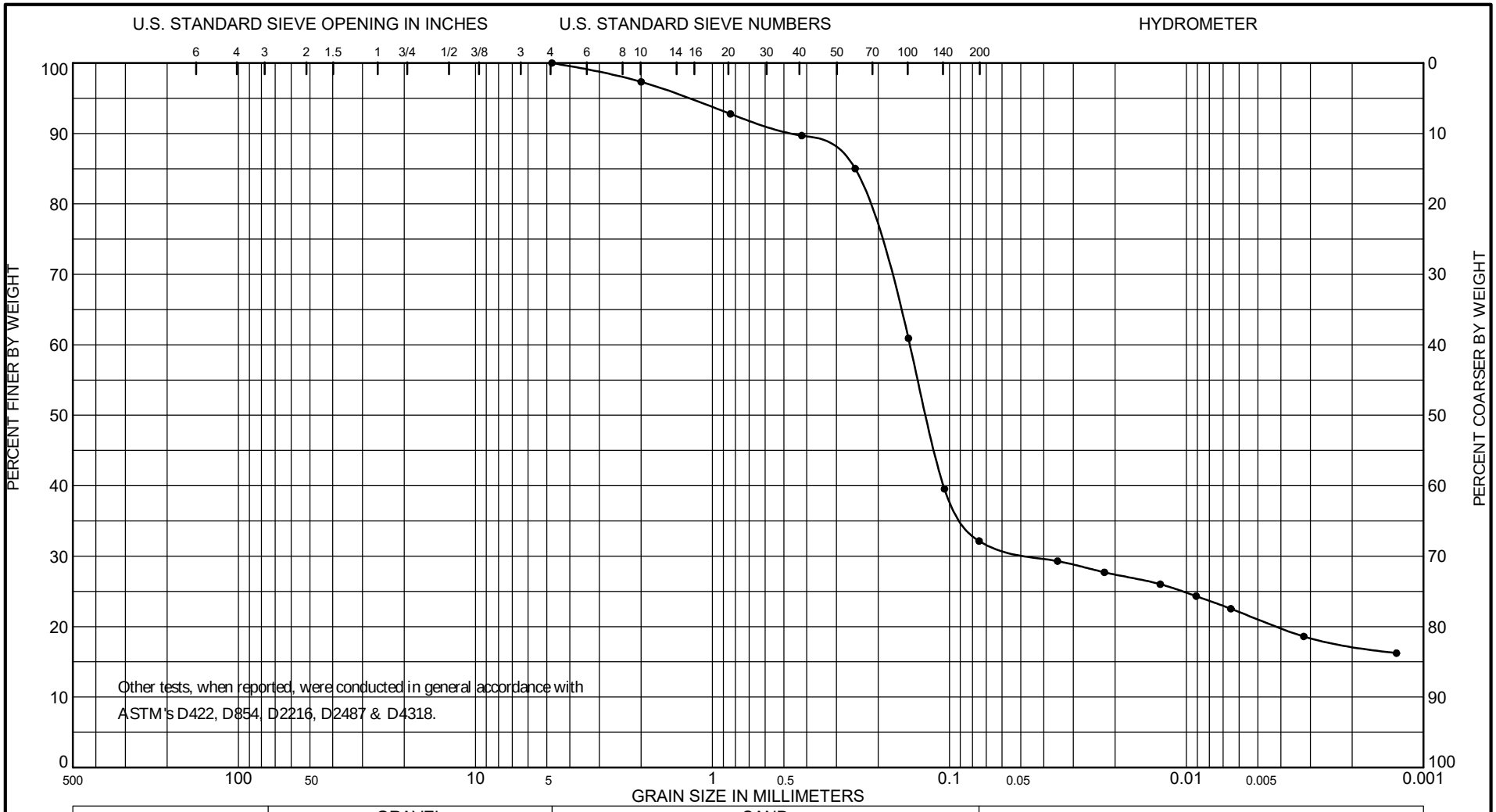
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-2	1.5 to 3.0	Dark Greenish Gray & Dark Grayish Brown, Clayey Sand High LL	72.7	86	26	60
		(SC-H).				

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15570

Hole No. MHSPT-09-19

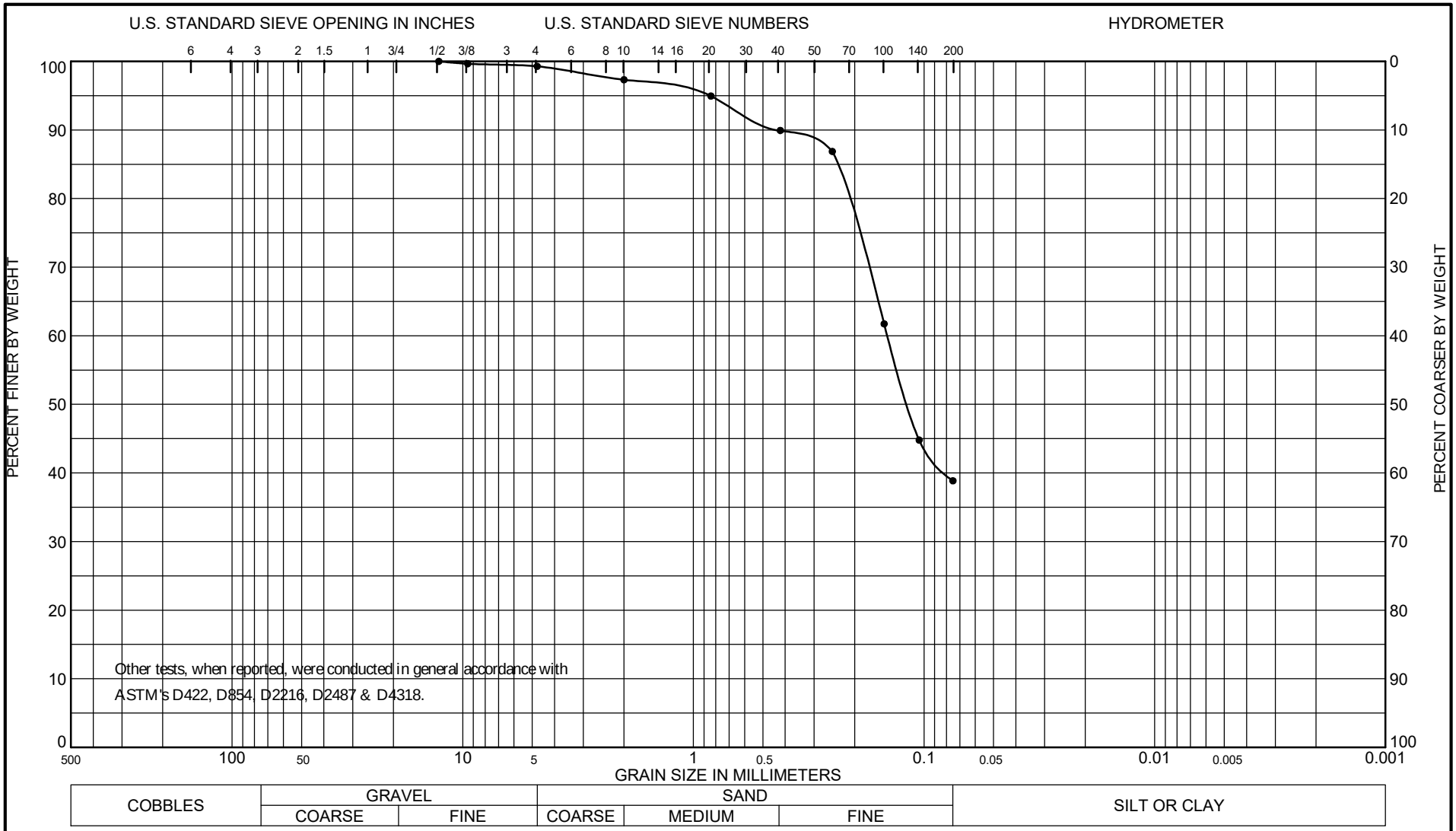
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-3	3.0 to 4.5	Dark Gray & Dark Grayish Brown, (Visual) Clayey Sand (SC).	54.3			

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15571

Hole No. MHSPT-09-19

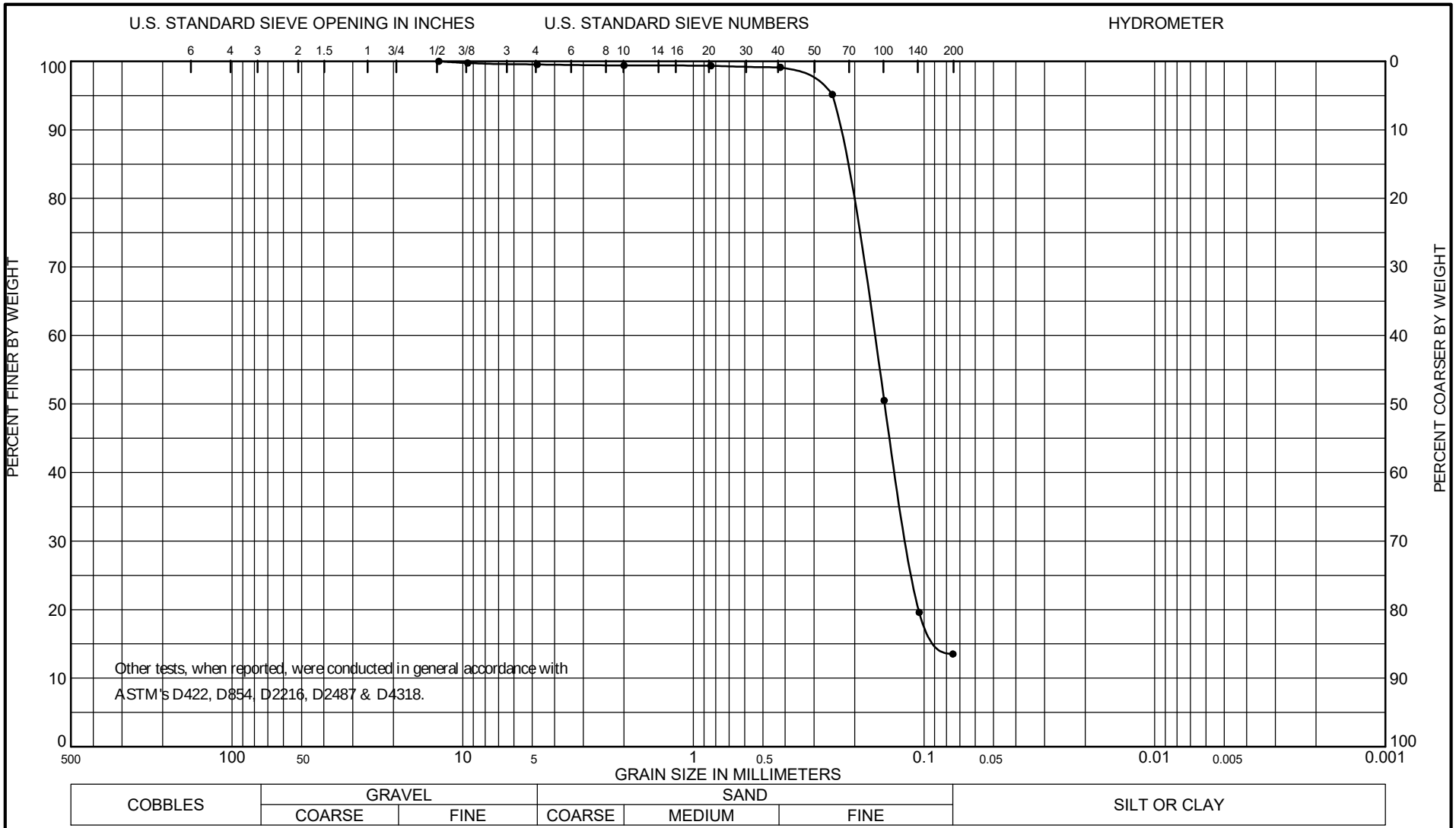
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-6	7.5 to 9.0	Dark Gray & Dark Grayish Brown, Silty Sand (SM).	31.9			

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15574

Hole No. MHSPT-09-19

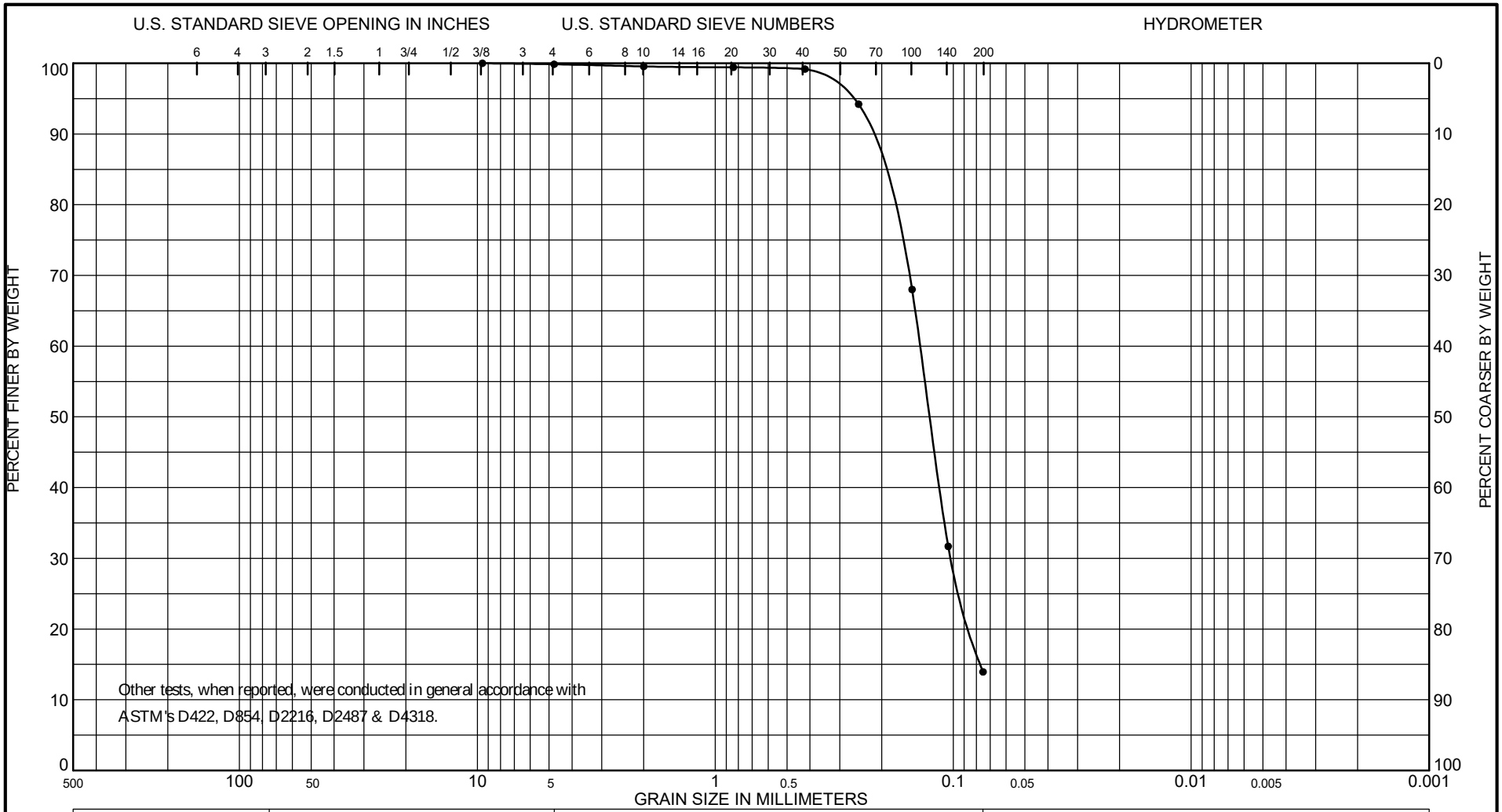
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-8	10.5 to 12.0	Dark Gray & Dark Grayish Brown, Silty Sand (SM).	28.0			

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15576

Hole No. MHSPT-09-19

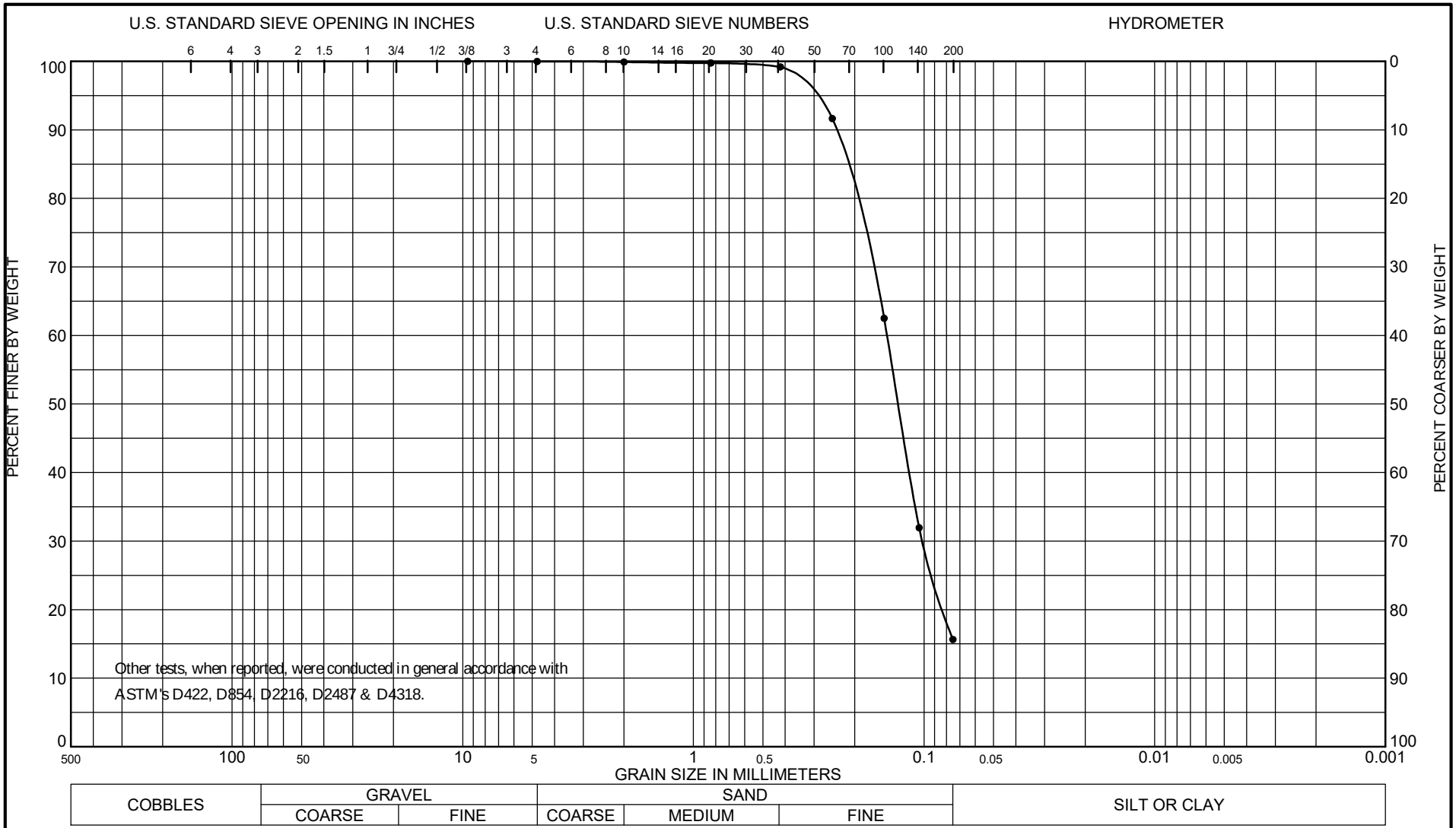
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-9	12.0 to 13.5	Dark Gray & Dark Grayish Brown, Silty Sand (SM).	27.9			

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15577

Hole No. MHSPT-09-19

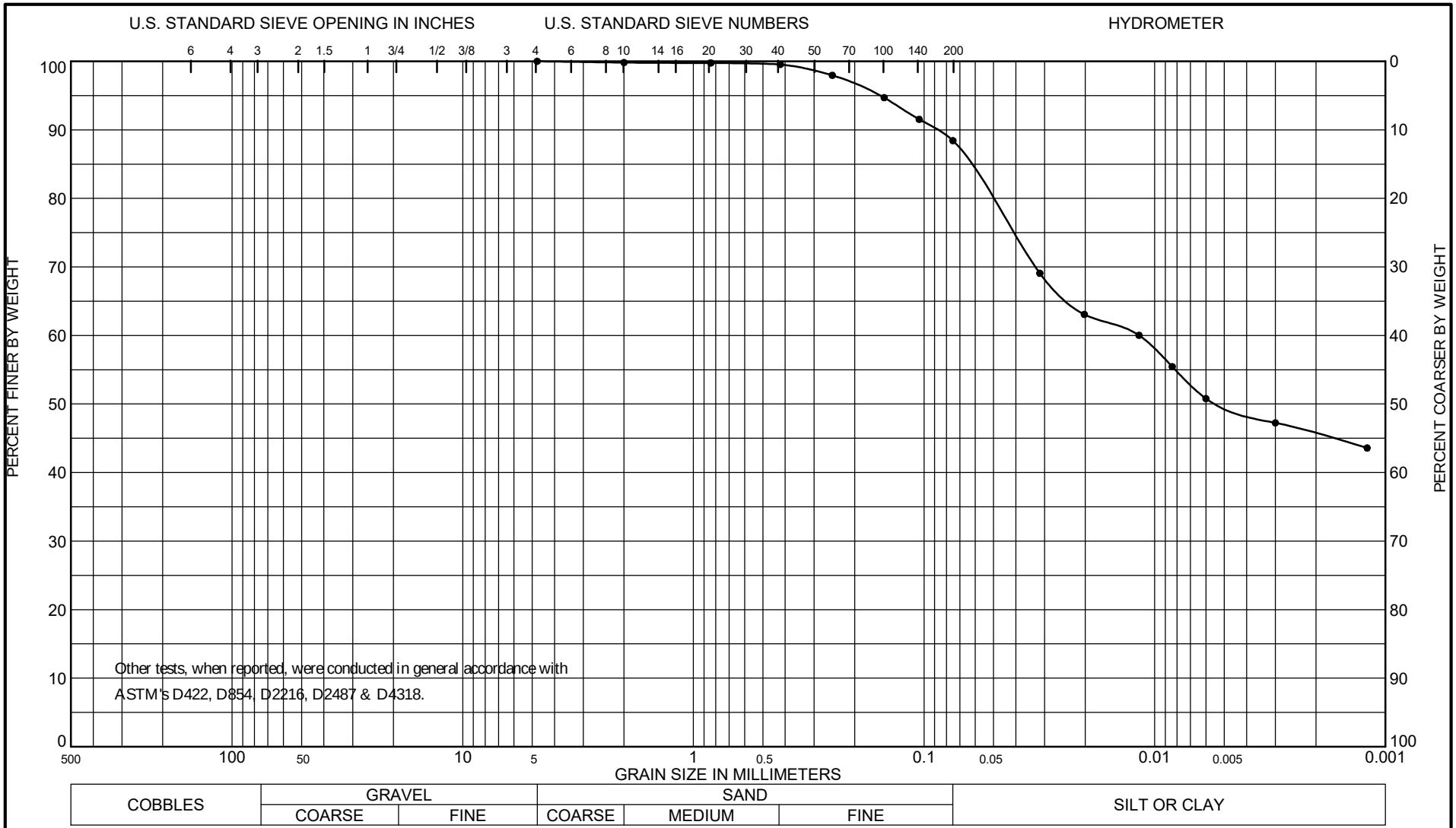
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-12	16.5 to 18.0	Dark Gray & Dark Grayish Brown, Fat Clay (CH), with a little sand.	54.7	100	26	74

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15580

Hole No. MHSPT-09-19

Date 6/26/21

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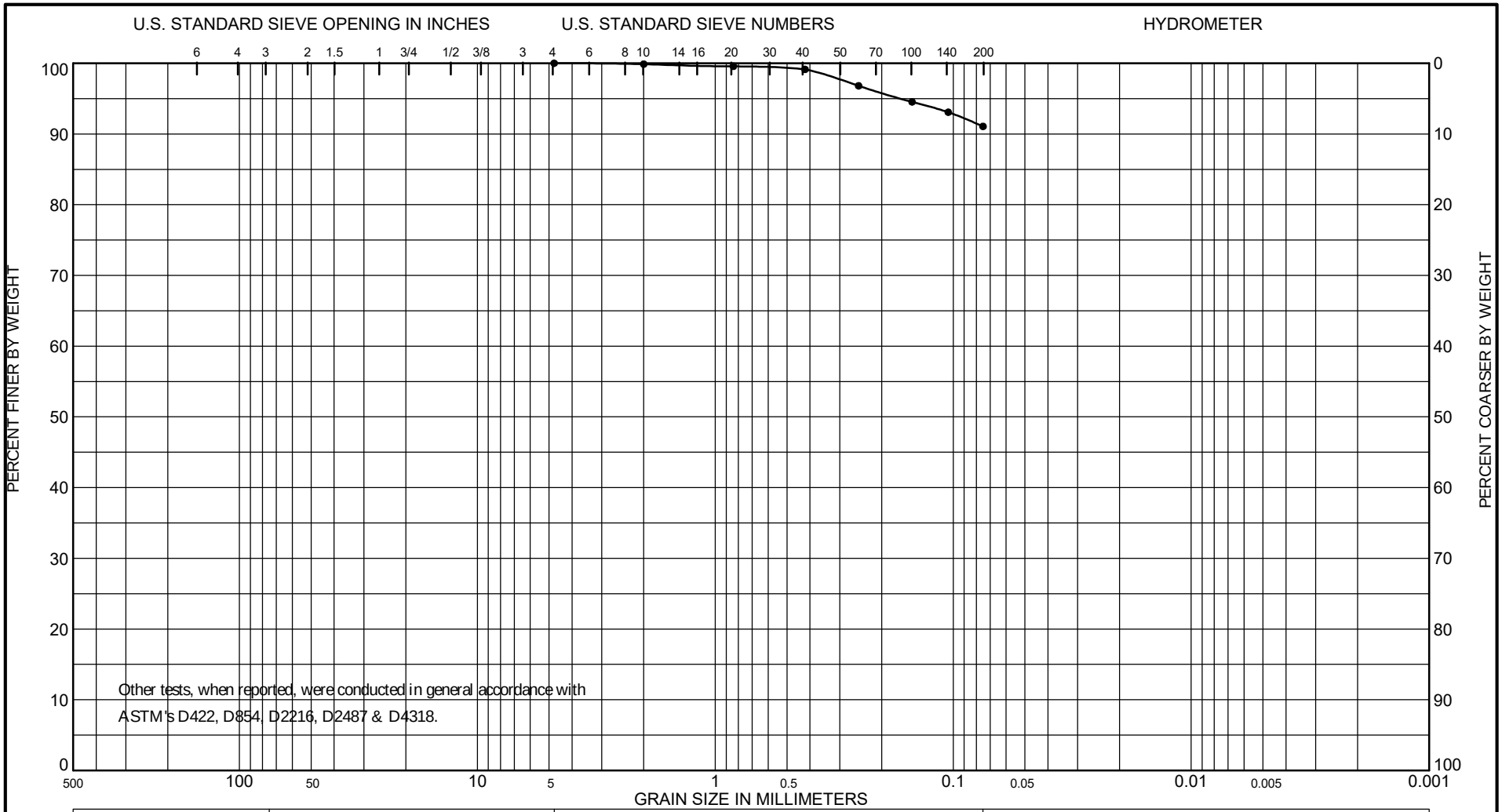
DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-15	21.0 to 22.5	Dark Greenish Gray & Dark Grayish Brown, Fat Clay (CH), with a trace of sand.	55.7	90	26	64

Project Mobile Harbor
Soil Testing Mobile, AL
Lab No. K5/15583
Hole No. MHSPT-09-19
Date 6/26/21

GRADATION CURVES

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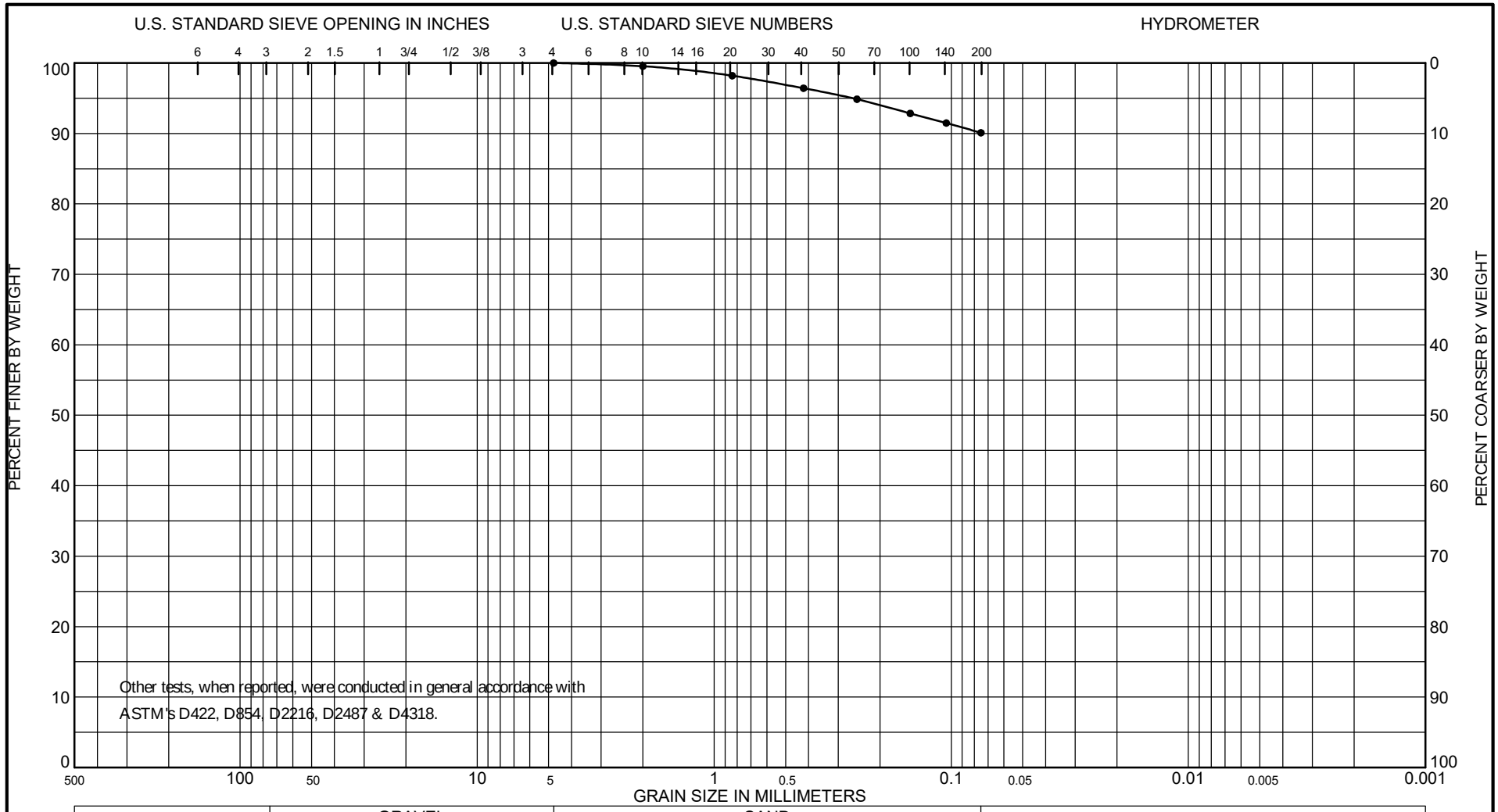
DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-3	3.0 to 4.5	Olive Brown & Dark Gray, (Visual) Fat Clay (CH), with a trace of sand.	215.1			

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15593

Hole No. MHSPT-10-19

Date 6/26/21

GRADATION CURVES

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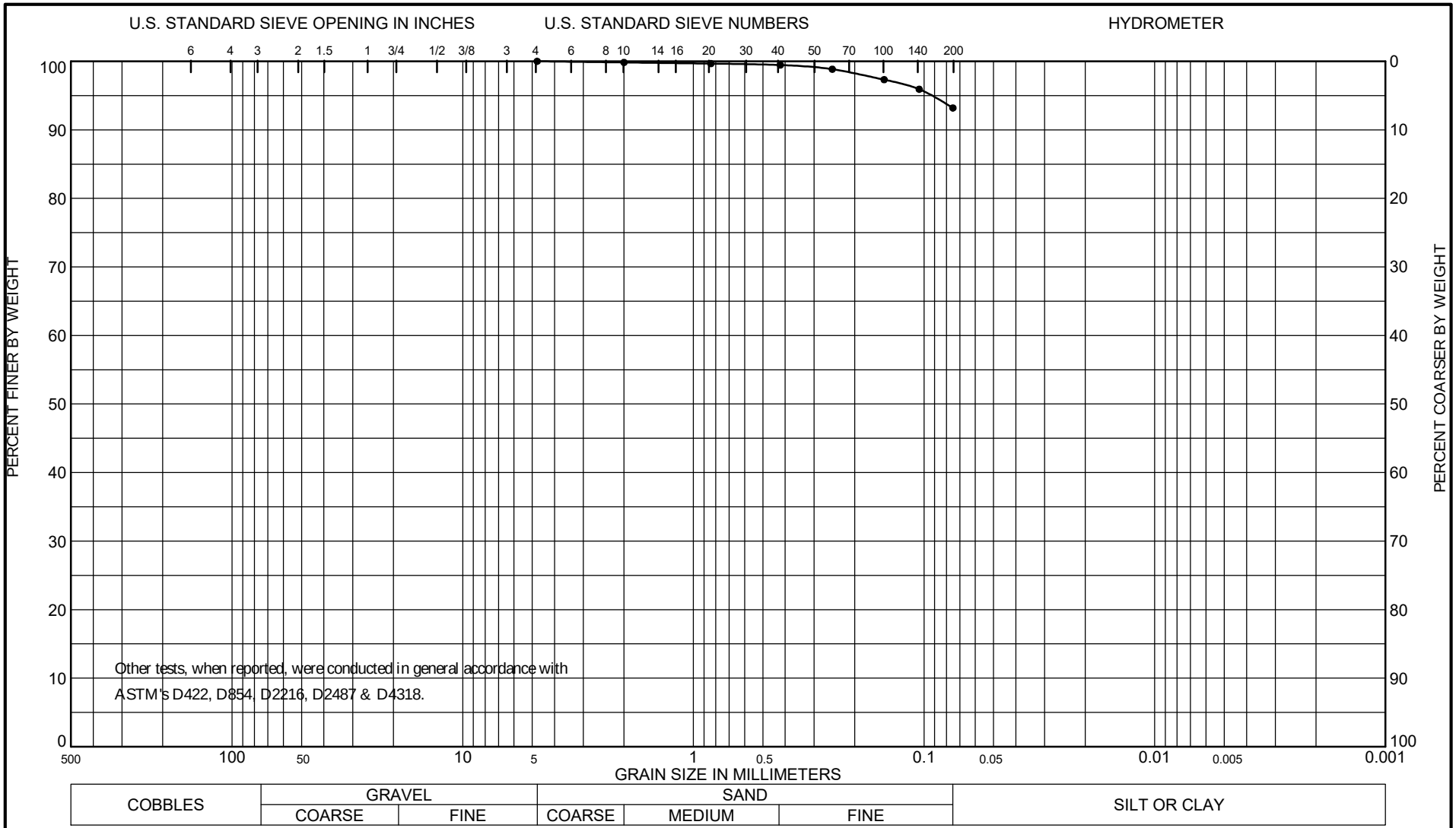
DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-7	9.0 to 10.5	Very Dark Gray & Very Dark Grayish Brown, (Visual) Fat Clay	53.4			
		(CH), with a trace of sand.				

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15632

Hole No. MHSPT-10-19

Date 6/26/21

GRADATION CURVES

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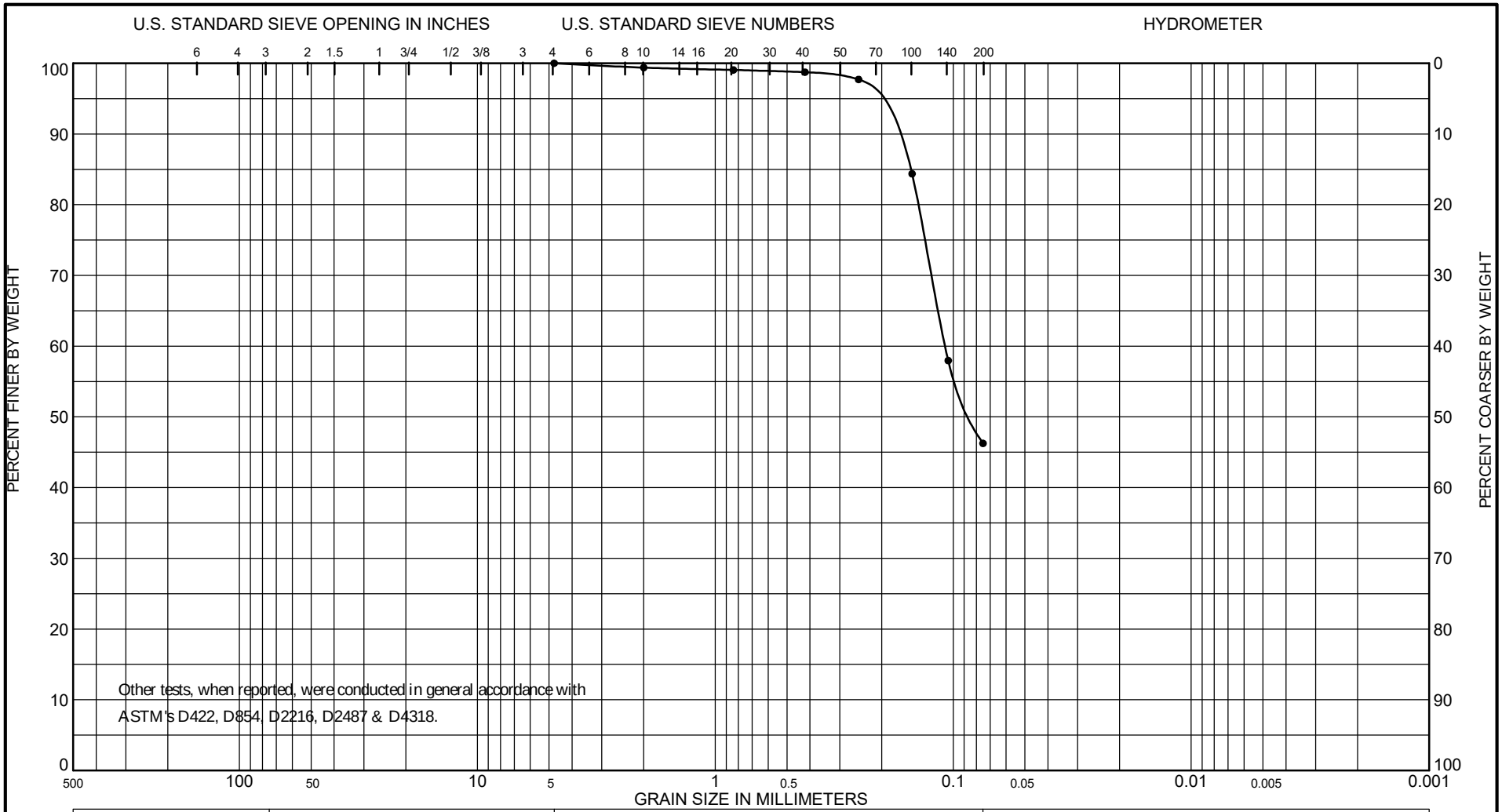
DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-3	3.0 to 4.5	Dark Greenish Gray & Dark Gray, (Visual) Clayey Sand (SC).	59.7			

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15639

Hole No. MHSPT-11-19

Date 6/26/21

GRADATION CURVES

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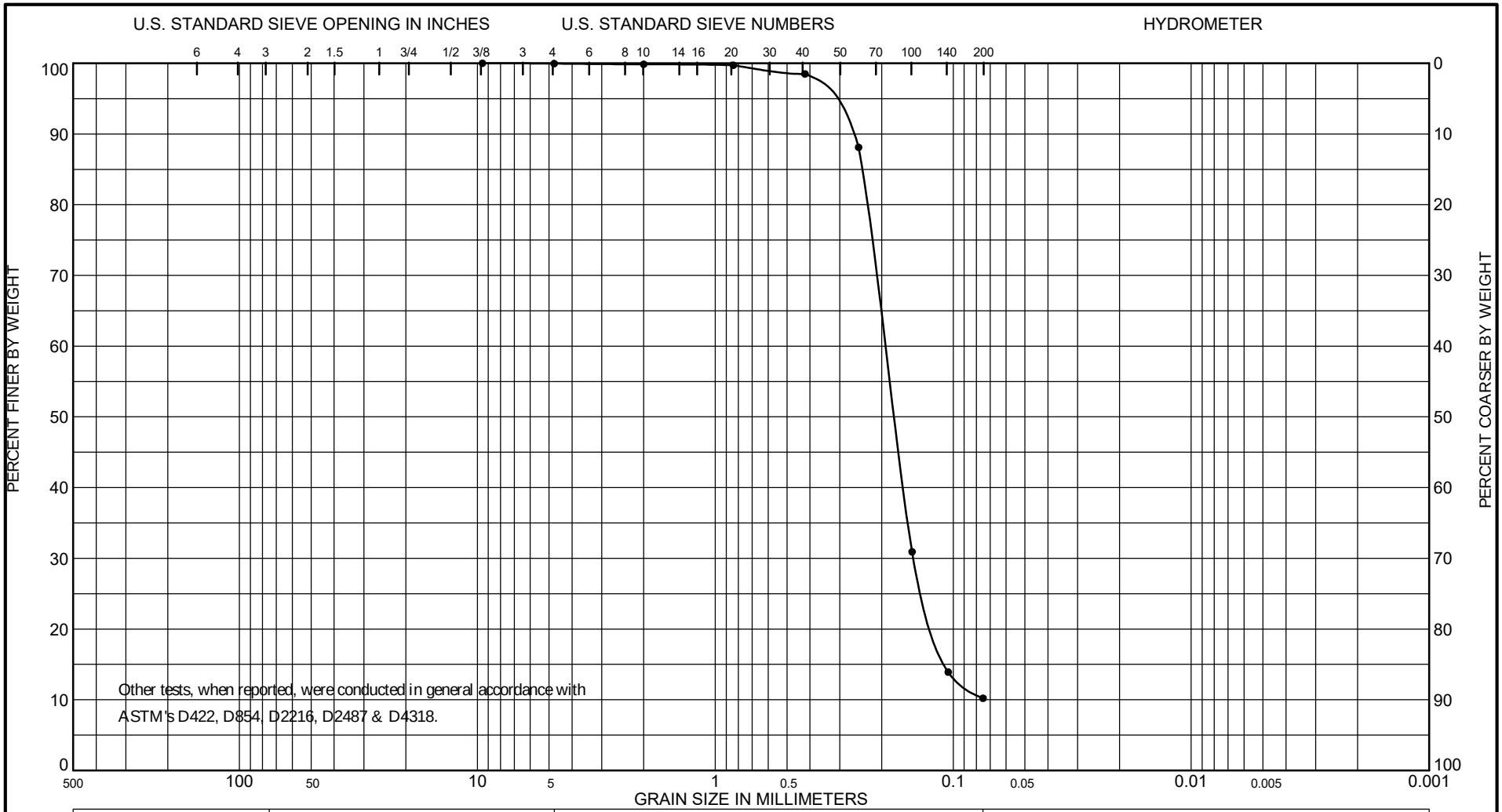
DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-9	12.0 to 13.5	Dark Grayish Brown & Dark Gray, Poorly Graded Silty Sand	21.5			
		(SP-SM).				

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15645

Hole No. MHSPT-11-19

Date 6/26/21

GRADATION CURVES

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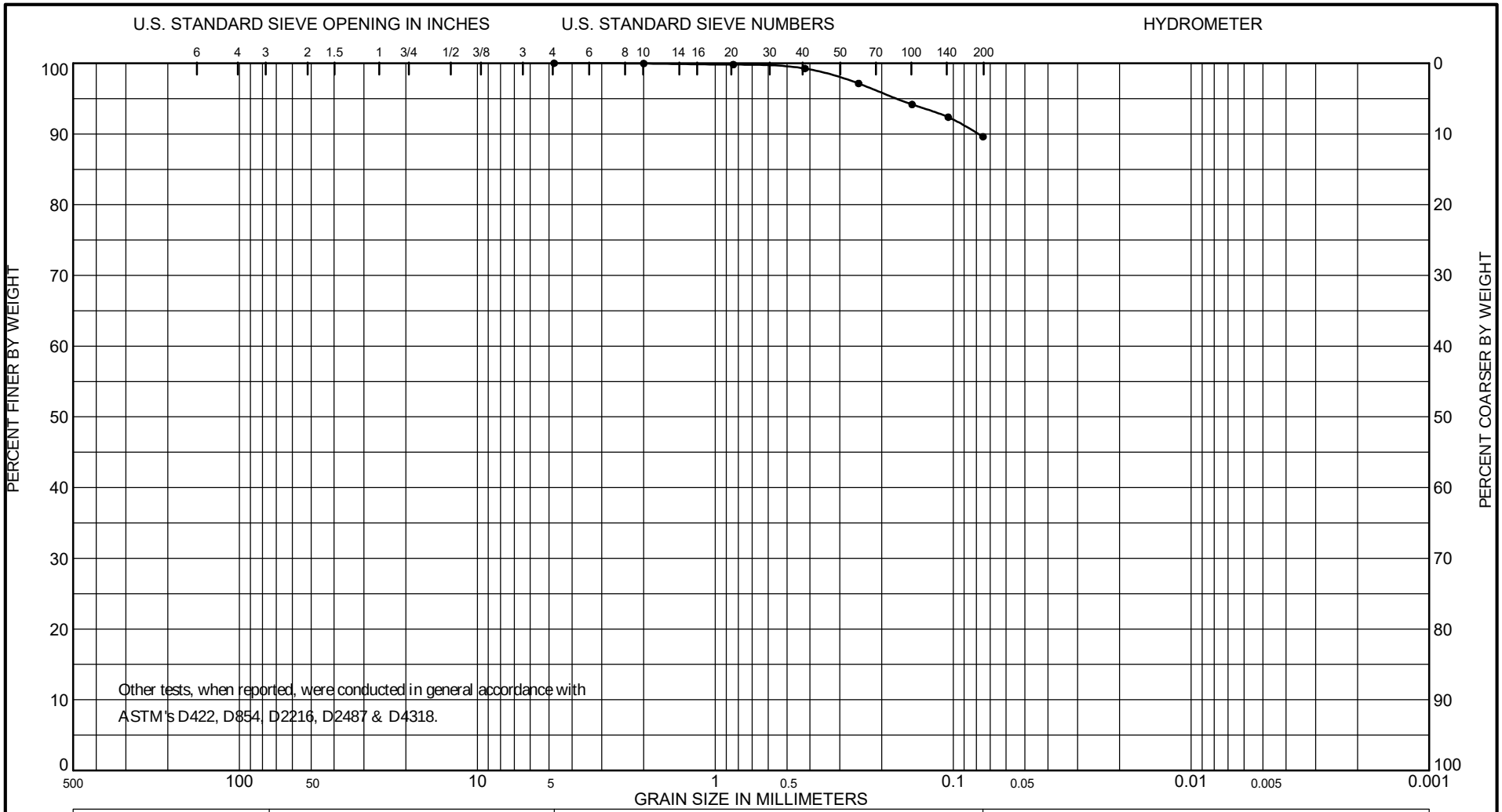
DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-15	19.5 to 21.0	Dark Grayish Brown & Dark Greenish Gray, Fat Clay (CH), with a little sand.	36.4	90	25	65

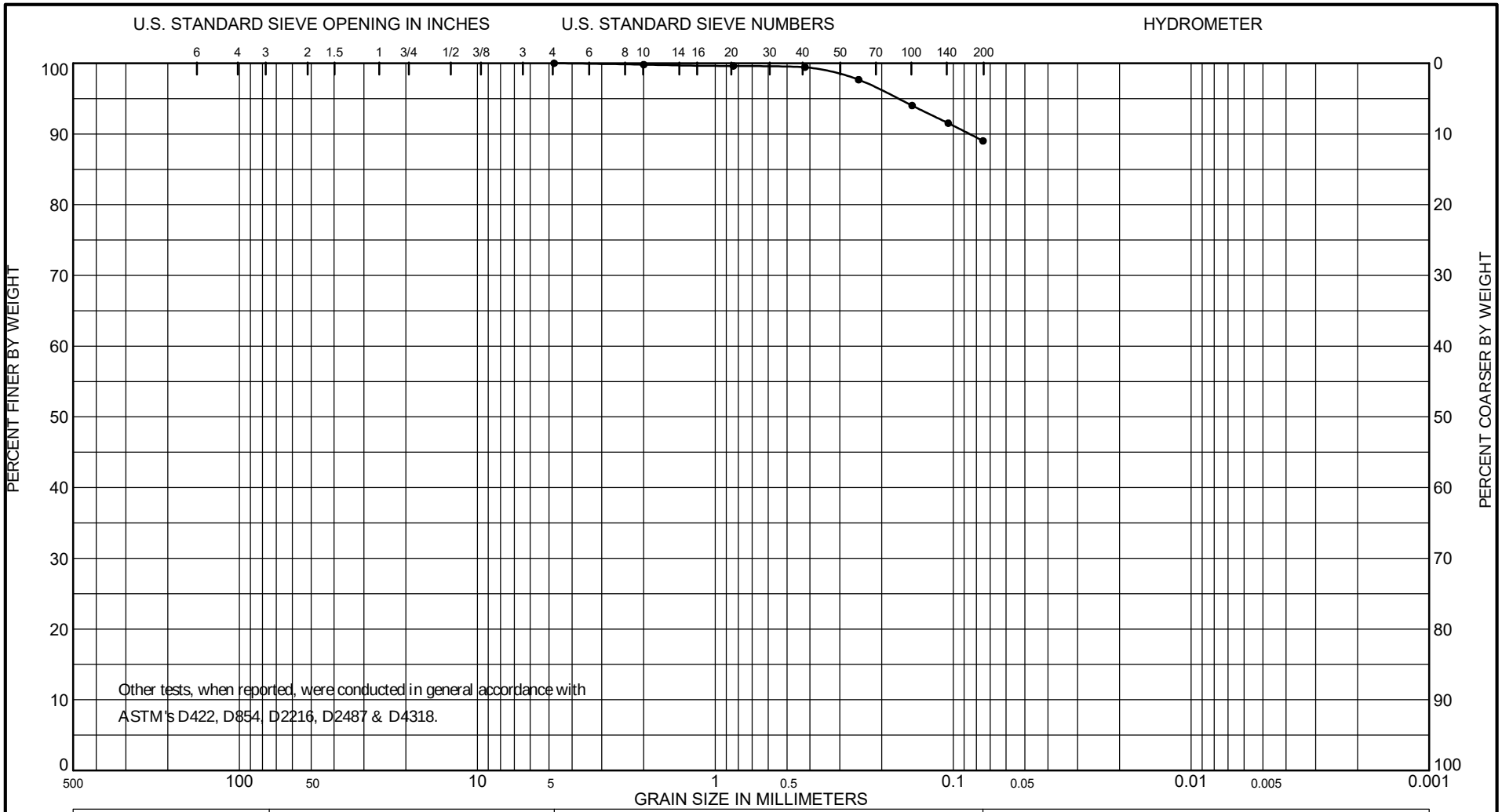
Project Mobile Harbor
Soil Testing Mobile, AL
Lab No. K5/15651
Hole No. MHSPT-11-19
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-21	28.5 to 30.0	Dark Gray & Dark Grayish Brown, Fat Clay (CH), with a little sand.	33.2	54	18	36

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15598

Hole No. MHSPT-11-19

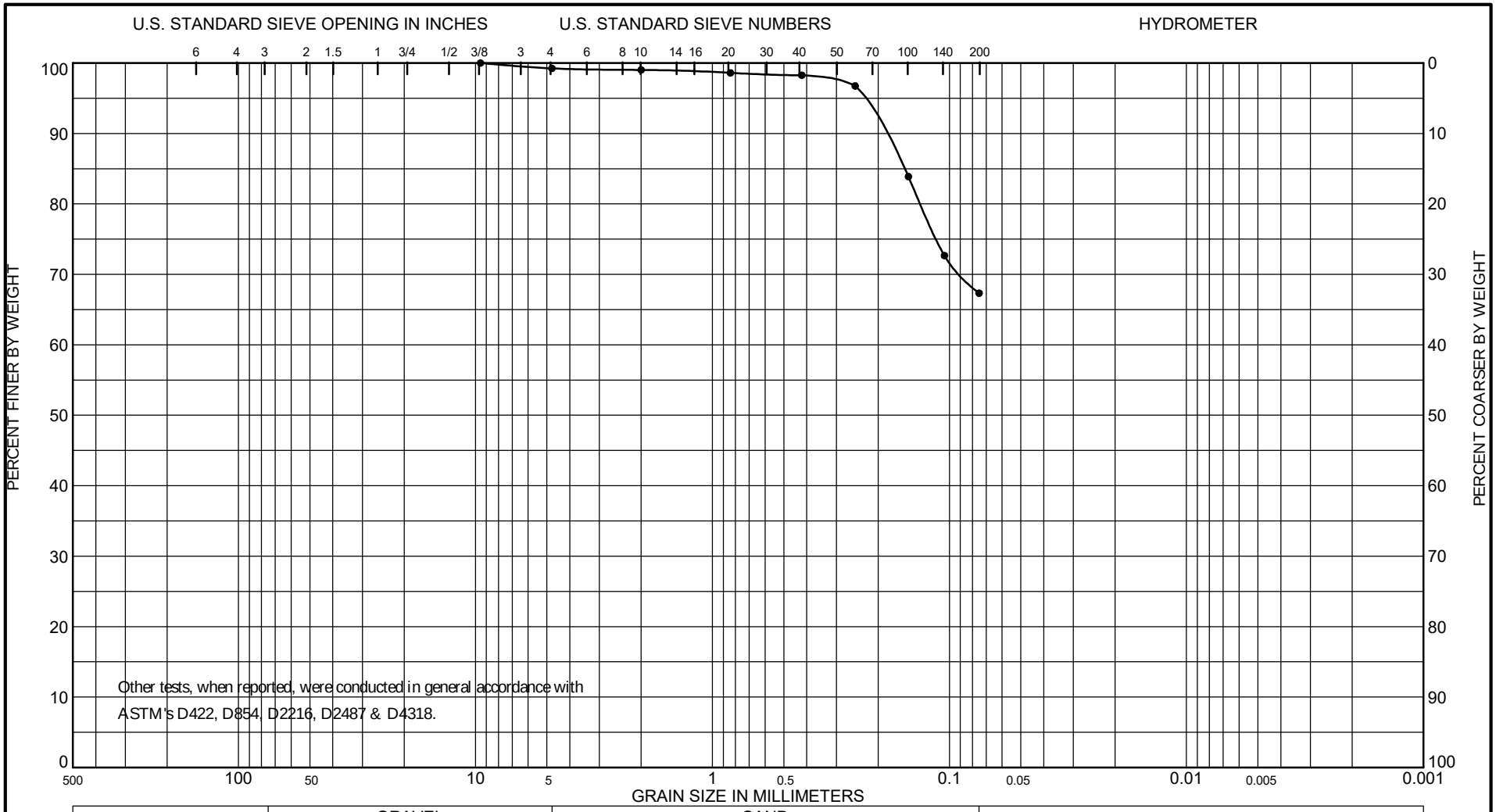
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-3	3.0 to 4.5	Dark Gray & Olive Brown, Fat Clay (CH), with some sand.	87.4	98	25	73

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15604

Hole No. MHSPT-12-19

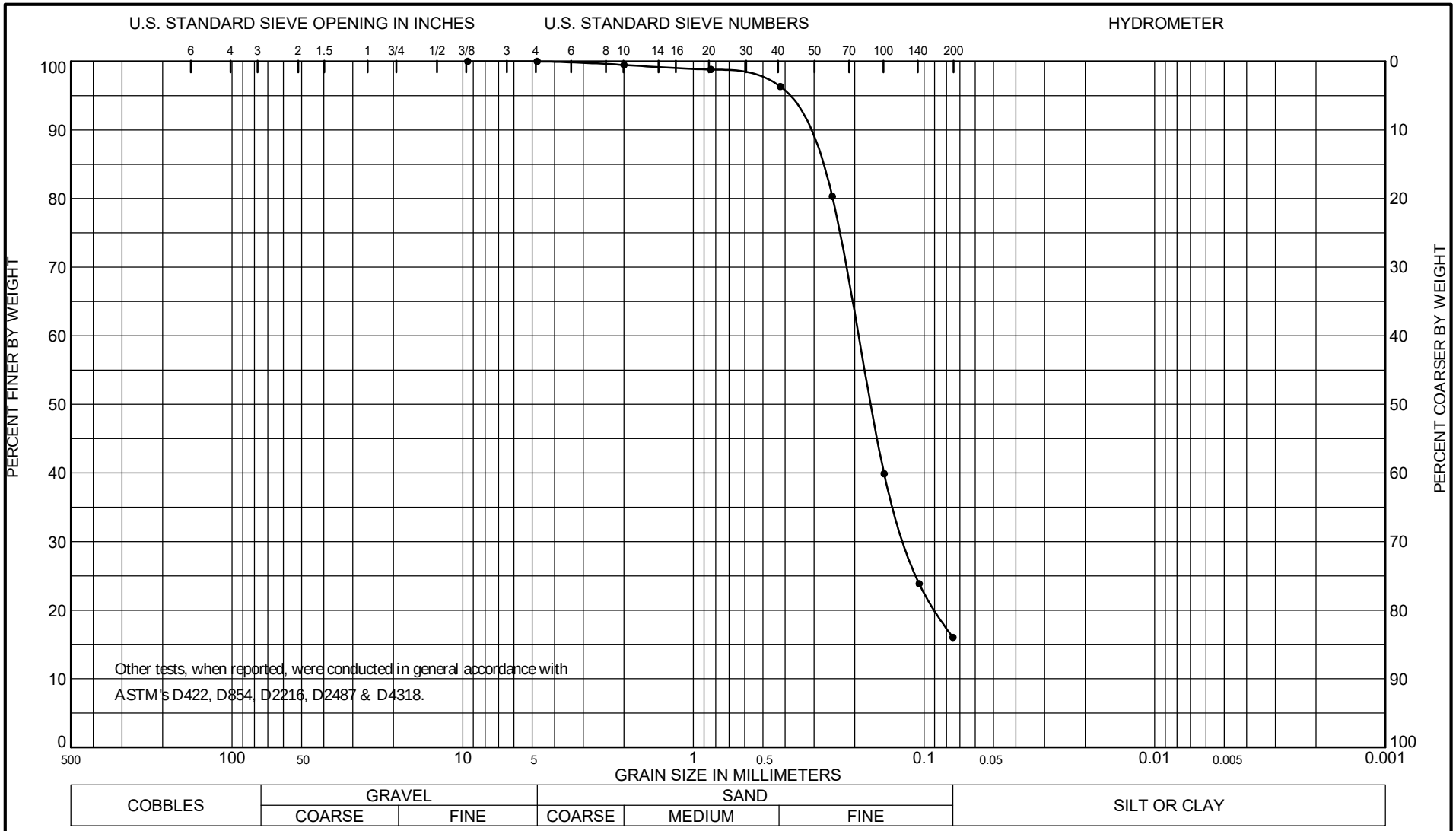
Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-18	25.5 to 27.0	Dark Gray & Olive Brown, Silty Sand (SM).	34.1			

Project Mobile Harbor
Soil Testing Mobile, AL
Lab No. K5/15619
Hole No. MHSPT-12-19
Date 6/26/21

GRADATION CURVES

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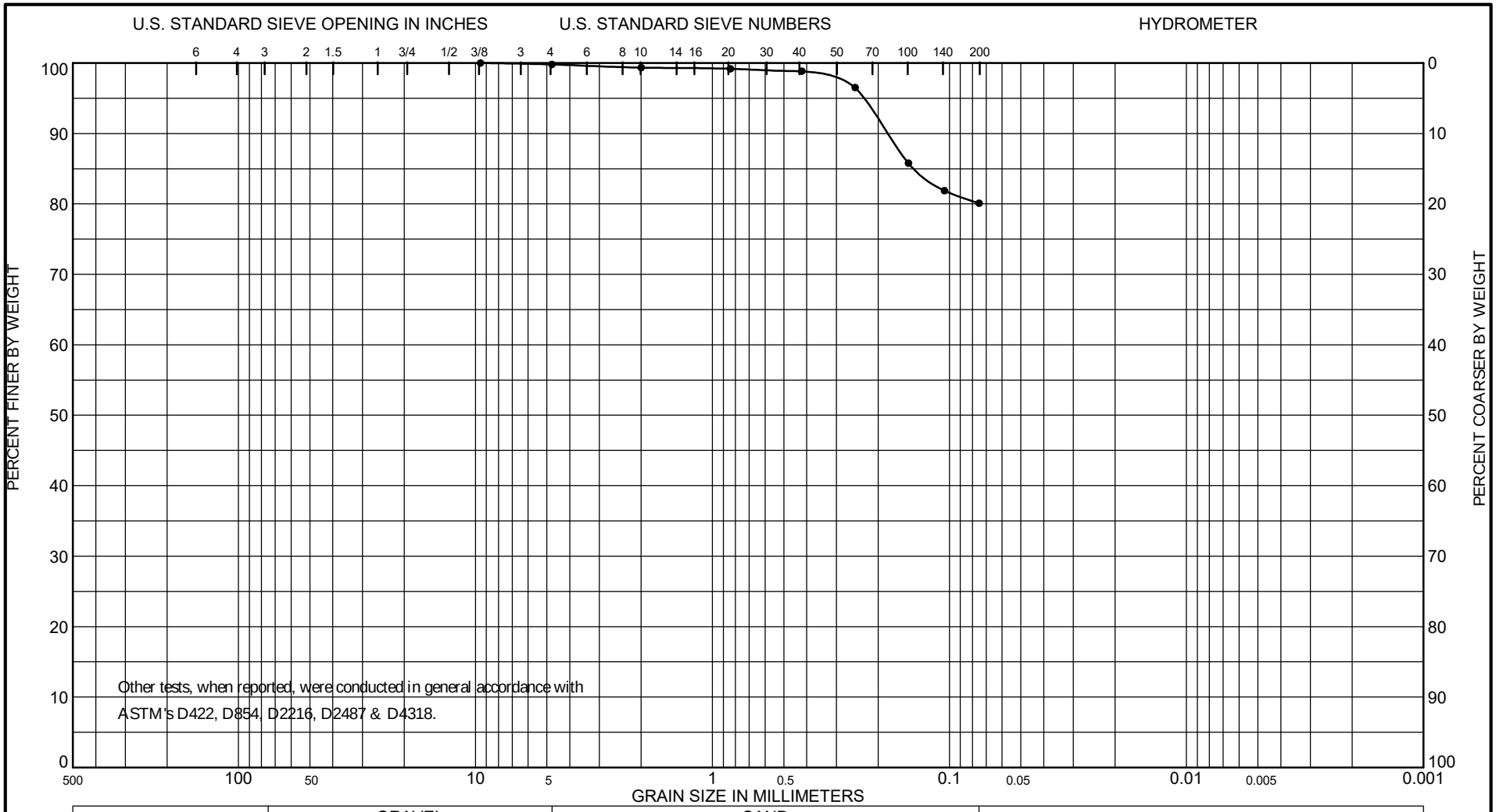
DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-23	33.0 to 34.5	Greenish Gray & Dark Grayish Brown, Fat Clay (CH), with a little sand.	36.6	83	18	65

Project Mobile Harbor
Soil Testing Mobile, AL
Lab No. K5/15624
Hole No. MHSPT-12-19
Date 6/26/21

GRADATION CURVES

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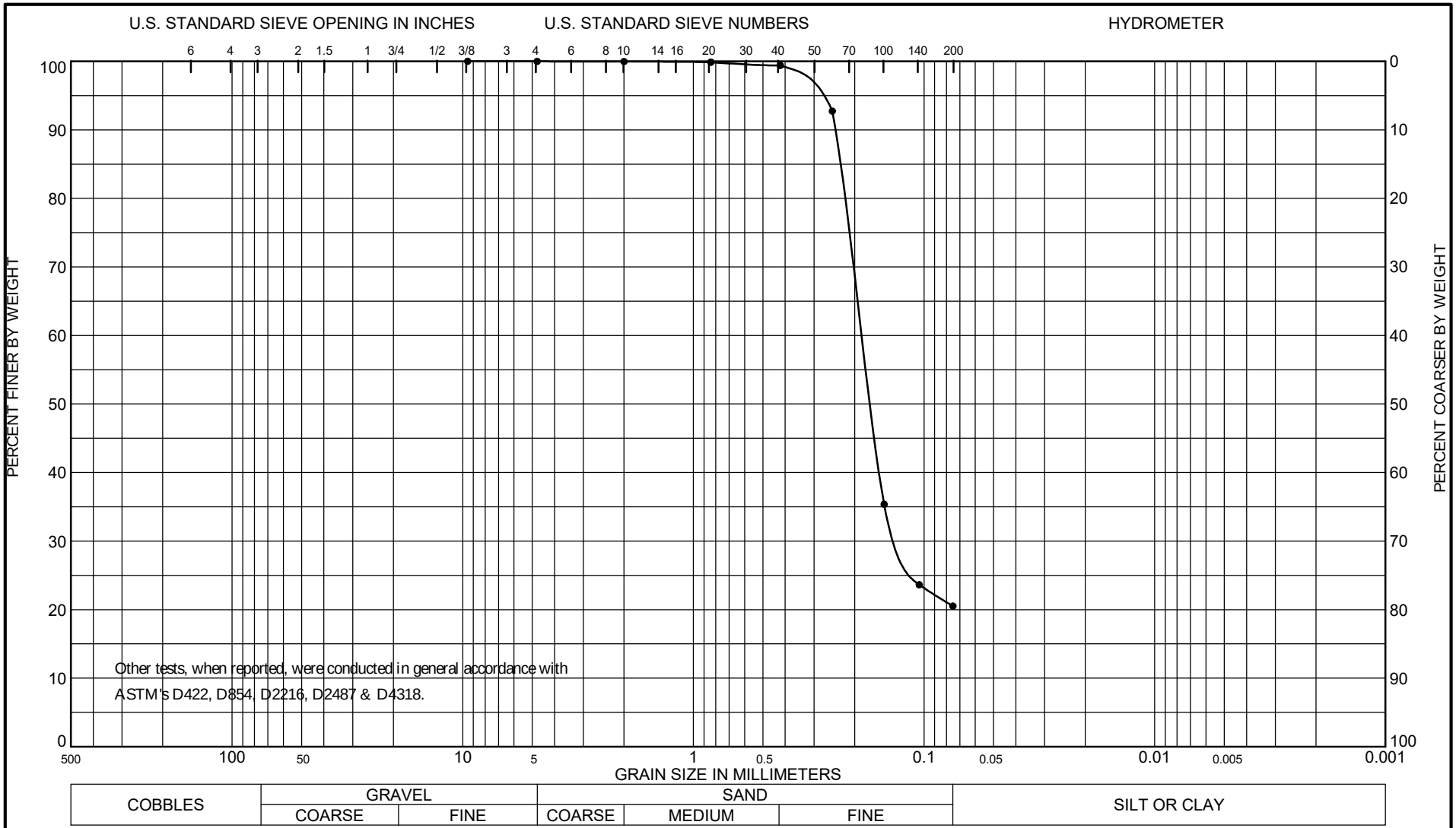
DEPARTMENT OF THE ARMY, SAVANNAH DISTRICT, ENVIRONMENTAL AND MATERIALS UNIT
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-25	36.0 to 37.5	Light Yellowish Brown & Greenish Gray, (Visual) Clayey Sand (SC).	26.9			

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15626

Hole No. MHSPT-12-19

Date 6/26/21

GRADATION CURVES

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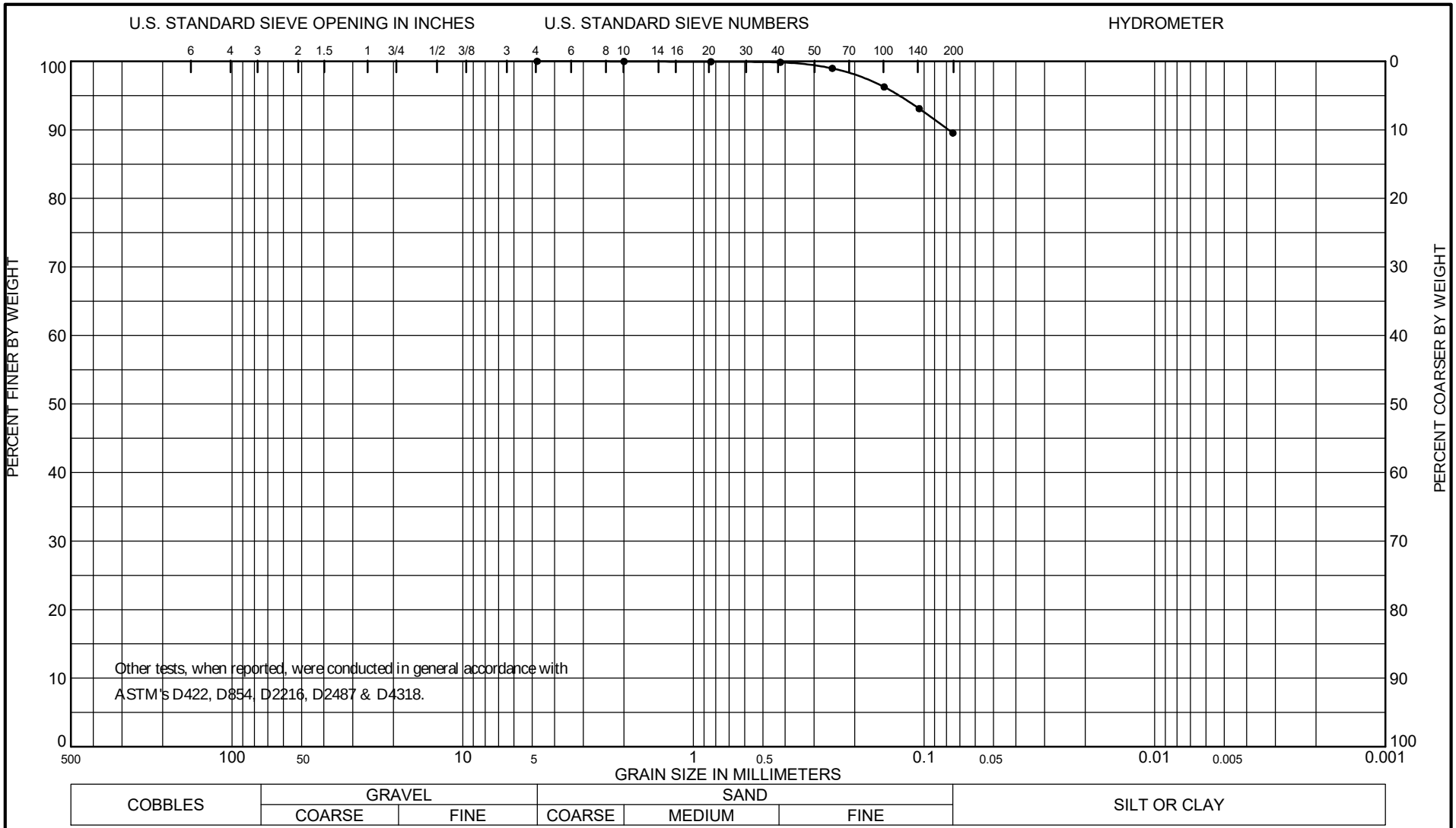
CORPS OF ENGINEERS, 200 N. COBB PARKWAY, BLDG 400 SUITE 404, MARIETTA, GA. 30062

WORK ORDER: 1305e
REQUISITION: W31XNJ10361923, 5BK9F1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Sample No.	Depth (ft)	ASTM D2487 Classification	Nat w%	LL	PL	PI
S-3	3.0 to 4.5	Light Brownish Gray, (Visual) Fat Clay (CH), with a little sand.				

Project Mobile Harbor

Soil Testing Mobile, AL

Lab No. K5/15655

Hole No. MHSPT-13-19

Date 6/26/21

GRADATION CURVES

Replaced by Amendment No. W9127824B0002-0001

SUMMARY OF MATERIAL PROPERTIES

PROJECT: Mobile Harbor LOCATION: Mobile, AL **25-Jun-21**

REQUISITION NO : W31XNJ10361923, 5BK9F1 **WORK ORDER:** 1305e

				ASTM D422 & D1140 Grain Size Analysis - Percent Passing											D4318 Atterberg Limits			D2216	D854			D2487 Unified Soil
LAB Number	Hole Number	Sample Number	Depth (ft)	3/4 in %	1/2 in %	3/8 in %	No.4 %	No.10 %	No.20 %	No.40 %	No.60 %	No.100 %	No.140 %	No 200 %	LL	PL	PI	MC%	SpG	Color	Class.	Classification System
KS/15241	MHSPT-05-19	S-2A	1.5 to 3.0	100	99.4	99.4	98.7	98.1	97.1	89	45.1	12.3	10.8	10.2				27.02		Grayish Brown & Dark Gray	SP-SM	Poorly Graded Silty Sand (SP-SM), with a trace of gravel.
KS/15242	MHSPT-05-19	S-2B	1.5 to 3.0			100	99.9	99.8	99.5	94.2	50.8	9.3	4.7	4				23.08		Light Brownish Gray, Gray & Yellowish Brown	SP	Poorly Graded Sand (SP).
KS/15245	MHSPT-05-19	S-4	4.5 to 6.0			100	99	97.9	97.2	93	73.6	54.3	51.1	45.8				38.53		Dark Gray, Grayish Brown & Yellowish Brown	SC	(Visual) Clayey Sand (SC), with a trace of gravel.
KS/15247	MHSPT-05-19	S-6	7.5 to 9.0				100	99.9	99.7	98.9	73.6	32.9	17.1	7.9				26.3		Gray, Grayish Brown & Brown	SP-SM	Poorly Graded Silty Sand (SP-SM).
KS/15249	MHSPT-05-19	S-8	10.5 to 12.0					100	99.9	99.7	98.9	93.8	90.6	80	35	23	12	24.27		Dark Gray	CL	Lean Clay (CL), with some sand.
KS/15540	MHSPT-07-19	S-6	6.0 to 7.5				100	100	99.9	99.6	98.8	98	97.3	96.8	99	32	67	81.53		Dark Gray & Grayish Brown	CH	Fat Clay (CH), with a trace of sand.
KS/15555	MHSPT-08-19	S-4	3.0 to 4.5				100	100	99.8	95.5	78.2	67.8	34.3	14.9				25.17		Dark Gray & Grayish Brown	SM	Silty Sand (SM).
KS/15561	MHSPT-08-19	S-10	12.0 to 13.5				100	99.9	98.4	58.6	20.1	16	11.2	6.7				17.25		Gray & Grayish Brown	SP-SM	Poorly Graded Silty Sand (SP-SM).
KS/15570	MHSPT-09-19	S-2	1.5 to 3.0				100	97.3	92.8	89.7	85	60.9	39.5	32.2	86	26	60	72.66		Dark Greenish Gray & Dark Grayish Brown	SC-H	Clayey Sand High LL (SC-H).
KS/15571	MHSPT-09-19	S-3	3.0 to 4.5		100	99.7	99.3	97.3	95	89.9	86.9	61.7	44.8	38.9				54.25		Dark Gray & Dark Grayish Brown	SC	(Visual) Clayey Sand (SC).
KS/15574	MHSPT-09-19	S-6	7.5 to 9.0		100	99.7	99.5	99.4	99.3	99.1	95.2	50.5	19.6	13.5				31.88		Dark Gray & Dark Grayish Brown	SM	Silty Sand (SM).
KS/15576	MHSPT-09-19	S-8	10.5 to 12.0			100	99.9	99.5	99.4	99.2	94.2	68	31.7	13.9				28.04		Dark Gray & Dark Grayish Brown	SM	Silty Sand (SM).
KS/15577	MHSPT-09-19	S-9	12.0 to 13.5			100	100	99.9	99.8	99.2	91.6	62.5	31.9	15.6				27.86		Dark Gray & Dark Grayish Brown	SM	Silty Sand (SM).
KS/15580	MHSPT-09-19	S-12	16.5 to 18.0				100	99.8	99.8	99.5	98	94.7	91.5	88.4	100	26	74	54.74		Dark Gray & Dark Grayish Brown	CH	Fat Clay (CH), with a little sand.
KS/15583	MHSPT-09-19	S-15	21.0 to 22.5				100	99.9	99.6	99.1	96.8	94.5	93.1	91.1	90	26	64	55.65		Dark Greenish Gray & Dark Grayish Brown	CH	Fat Clay (CH), with a trace of sand.
KS/15593	MHSPT-10-19	S-3	3.0 to 4.5				100	99.5	98.2	96.4	94.9	92.8	91.5	90.1				215.05		Olive Brown & Dark Gray	CH	(Visual) Fat Clay (CH), with a trace of sand.
KS/15632	MHSPT-10-19	S-7	9.0 to 10.5				100	99.8	99.7	99.5	98.8	97.3	95.9	93.2				53.42		Very Dark Gray & Very Dark Grayish Brown	CH	(Visual) Fat Clay (CH), with a trace of sand.
KS/15639	MHSPT-11-19	S-3	3.0 to 4.5				100	99.4	99.1	98.7	97.7	84.4	58	46.2				59.7		Dark Greenish Gray & Dark Gray	SC	(Visual) Clayey Sand (SC).
KS/15645	MHSPT-11-19	S-9	12.0 to 13.5			100	100	99.9	99.7	98.5	88.1	30.9	13.9	10.2				21.45		Dark Grayish Brown & Dark Gray	SP-SM	Poorly Graded Silty Sand (SP-SM).
KS/15651	MHSPT-11-19	S-15	19.5 to 21.0				100	100	99.8	99.3	97.1	94.2	92.4	89.6	90	25	65	36.37		Dark Grayish Brown & Dark Greenish Gray	CH	Fat Clay (CH), with a little sand.
KS/15598	MHSPT-11-19	S-21	28.5 to 30.0				100	99.8	99.6	99.4	97.7	94	91.5	89	54	18	36	33.17		Dark Gray & Dark Grayish Brown	CH	Fat Clay (CH), with a little sand.
KS/15604	MHSPT-12-19	S-3	3.0 to 4.5			100	99.2	99	98.6	98.3	96.7	83.9	72.7	67.3	98	25	73	87.38		Dark Gray & Olive Brown	CH	Fat Clay (CH), with some sand.
KS/15619	MHSPT-12-19	S-18	25.5 to 27.0			100	100	99.5	98.8	96.3	80.3	39.9	23.8	16				34.08		Dark Gray & Olive Brown	SM	Silty Sand (SM).
KS/15624	MHSPT-12-19	S-23	33.0 to 34.5			100	99.8	99.3	99.2	98.8	96.5	85.8	81.9	80.1	83	18	65	36.61		Greenish Gray & Dark Grayish Brown	CH	Fat Clay (CH), with a little sand.
KS/15626	MHSPT-12-19	S-25	36.0 to 37.5			100	100	100	99.9	99.4	92.7	35.4	23.6	20.5				26.92		Light Yellowish Brown & Greenish Gray	SC	(Visual) Clayey Sand (SC).
KS/15655	MHSPT-13-19	S-3	3.0 to 4.5				100	100	99.9	99.9	99	96.3	93.1	89.5						Light Brownish Gray	CH	(Visual) Fat Clay (CH), with a little sand.

USACE, Savannah District Materials Testing RTCX - Marietta, GA 30062

SS-X Borings

CORPS OF ENGINEERS | 4 | 3 | 2 | 1 | U. S. ARMY

REVISIONS					
SYM.	ZONE	DESCRIPTION	DATE	APPROVED	
		ADDED PRESENT STATIONING & LABELS	5/2018		

APPROXIMATE PRESENT 2018 CHANNEL STATIONS

1380+00 1400+00 1420+00 1440+00 1460+00 1480+00 1500+00 1520+00 1540+00

Mean Low Tide

ELEVATION IN FEET - MEAN LOW TIDE

0 -5 -10 -15 -20 -25 -30 -35 -40 -45 -50 -55

SS-137 275' Right ℄ — Blows Per Foot — Depth -338 — -513
SS-139 275' Left ℄ — Blows Per Foot — Depth -348 — -513
SS-141 ℄ Channel — Blows Per Foot — Depth -278 — -543
SS-143 275' Right ℄ — Blows Per Foot — Depth -318 — -573
SS-145 275' Left ℄ — Blows Per Foot — Depth -358 — -543
SS-147 275' Right ℄ — Blows Per Foot — Depth -398 — -543
SS-149 ℄ Channel — Blows Per Foot — Depth -348 — -513
SS-151 275' Left ℄ — Blows Per Foot — Depth -321 — -573
SS-153 275' Right ℄ — Blows Per Foot — Depth -283 — -513

Gray, Fat Clay (CH) Organic
Gray, Sandy Fat Clay (CH) Organic
Gray, Fat Clay (CH) organic
Gray, Sandy Lean Clay (CL) Organic
Gray, Lean Clay (CL) Organic

1120+00 1140+00 1160+00 1180+00 1200+00 1220+00 1240+00 1260+00 1280+00

ORIGINAL 1964 CHANNEL STATIONS

VERTICAL SCALE: 1"=5'
5' 0 5' 10 FT

NOTES:
For Layout of Borings see Sheet 2.
For Legend and Notes see Sheet 7.

U. S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
MOBILE, ALA.

MOBILE HARBOR, ALABAMA
BAY CHANNEL-(WEST SIDE)
LOGS OF BORINGS

SH. REF. NO. | SPEC. NO. | INV. SER. NO. | CIVENG-CR-076-64-98 | AS SCALE: SHOWN | SIZE | FILE NO. D-13-2-159 | DRAWING NO. | DATE: MAY 1964 | SHEET 11 of 13

E-1-7

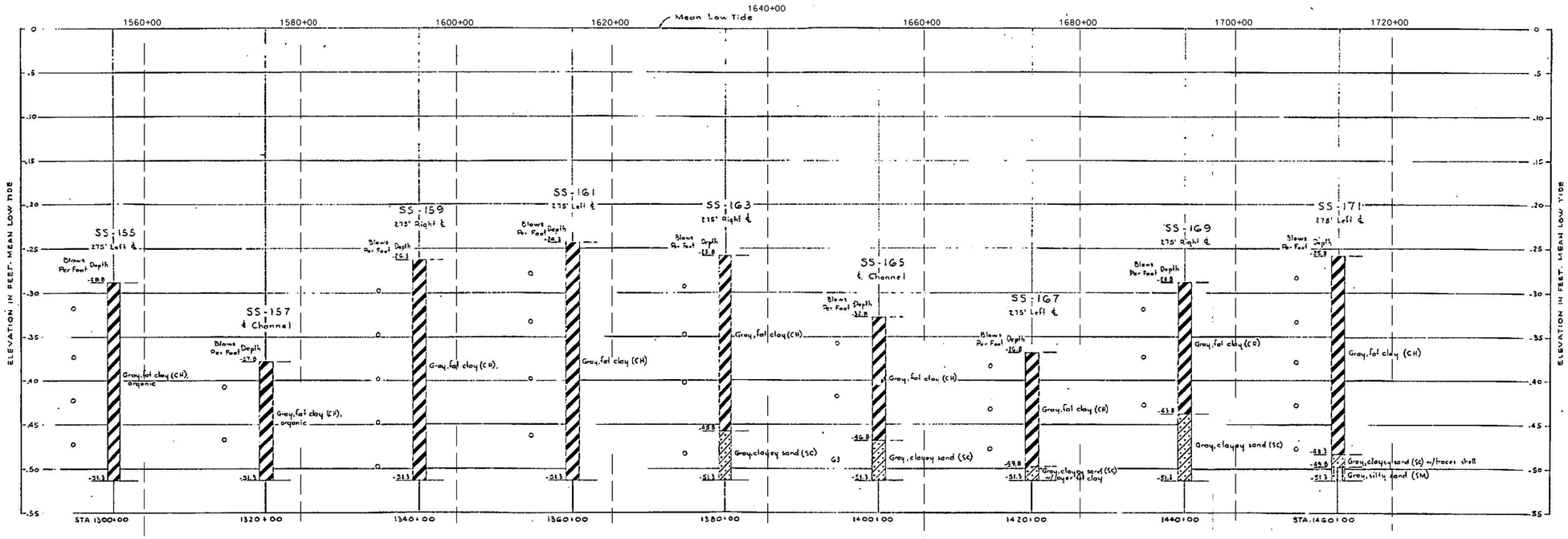
5 | 4 | 3 | 2 | 1

E D C B A

CORPS OF ENGINEERS | 4 | 3 | 2 | 1 | U. S. ARMY

REVISIONS					
SYM.	ZONE	DESCRIPTION	DATE	APPROVED	
		ADDED PRESENT STATIONING & LABELS	5/2018		

APPROXIMATE PRESENT 2018 CHANNEL STATIONS



VERTICAL SCALE: 1"=5'
5' 0 5 10 FT

NOTES:
For Layout of Borings see Sheet G.
For Legend and Notes see Sheet 7.

U. S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
MOBILE, ALA.

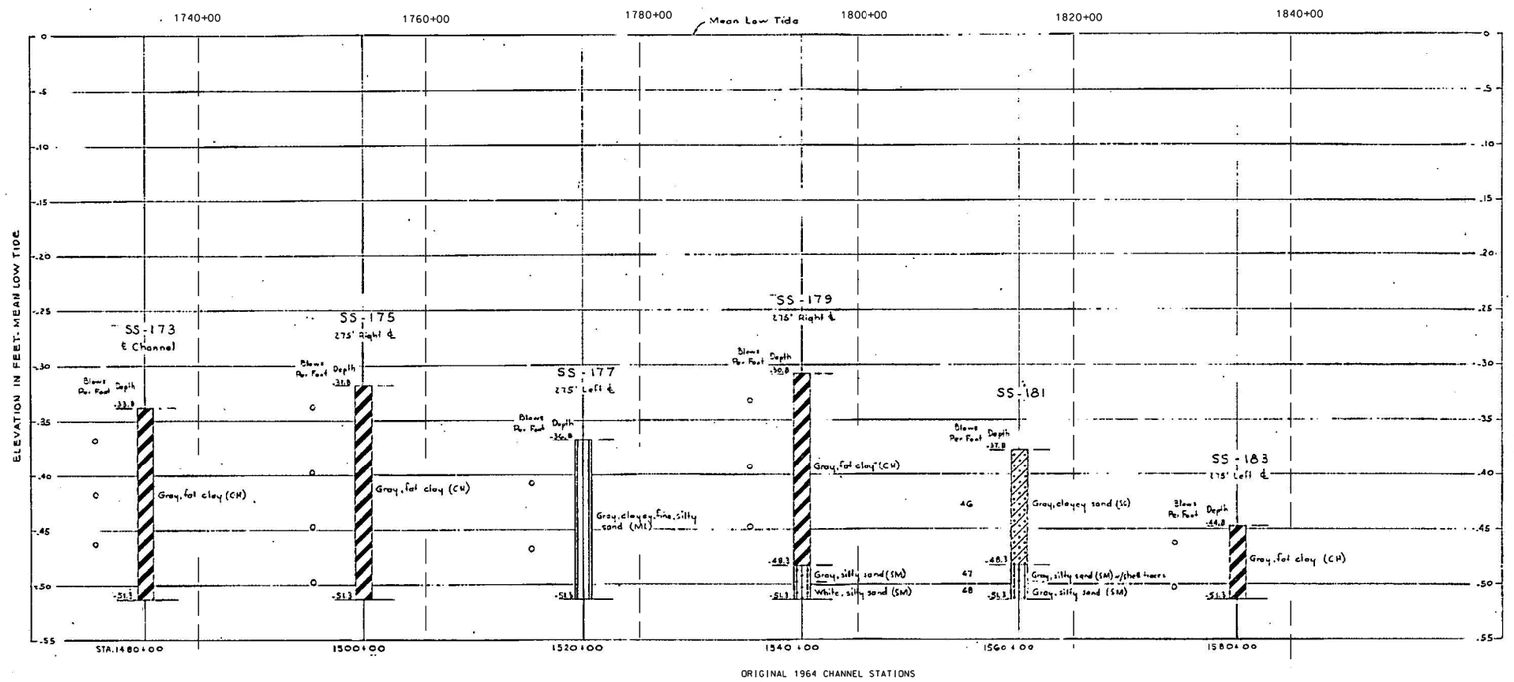
MOBILE HARBOR, ALABAMA
BAY CHANNEL-(WEST SIDE)
LOGS OF BORINGS

SH. REF. NO.	SPEC. NO. INV. DEP. NO. CIVENG -	SIZE	FILE NO. D-13-2-160
	01-078-64-98		DRAWING NO.
	SCALE: SHOWN	DATE: MAY 1964	SHEET 12 of 13

5 | 4 | 3 | 2 | 1 E-1-8

REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APPROVED
		ADDED PRESENT STATIONING & LABELS	5/2018	

APPROXIMATE PRESENT 2018 CHANNEL STATIONS



ORIGINAL 1964 CHANNEL STATIONS

VERTICAL SCALE: 1"=5'

5' 0 5 10 FT

NOTES:

For Layout of Borings see Sheet 6.
For Legend and Notes see Sheet 7.

U. S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
MOBILE, ALA.

MOBILE HARBOR, ALABAMA
BAY CHANNEL-(WEST SIDE)
LOGS OF BORINGS

SH. REF. NO.	SPEC. NO. INV. BCH. NO. CIVENG- 01-078-84-98	SIZE	FILE NO. D-13-2-161
	AS		DRAWING NO.
	SCALE: SHOWN	DATE: MAY 1964	SHEET 13 of 13

E-1-9

VC-X-84 & SG-X-82
Borings

Hole No. VC - 42 - 84

DRILLING LOG	DIVISION SAD	INSTALLATION MDO	SHEET 1 OF 1 SHEETS

1. PROJECT: MOBILE HARBOR CHANNEL DEEPENING
2. LOCATION (Coordinates or Station): BETWEEN BN 27 & BN 28, C/L CHANNEL
3. DRILLING AGENCY: MDO — N. 112,250 E. 382,350
4. HOLE NO. (As shown on drawing title and file number): VC - 42 - 84
5. NAME OF DRILLER: C. FULLER
6. DIRECTION OF HOLE: [X] VERTICAL [ ] INCLINED ______ DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN
8. DEPTH DRILLED INTO ROCK
9. TOTAL DEPTH OF HOLE: 20.0' (EL. - 61.0)
10. SIZE AND TYPE OF BIT: 4" VIBRACORE
11. DATUM FOR ELEVATION SHOWN (TBM or MSL): MLLW ± 3 FT.
12. MANUFACTURER'S DESIGNATION OF DRILL: BARGE
13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN: DISTURBED 4 | UNDISTURBED 0
14. TOTAL NUMBER CORE BOXES: 0
15. ELEVATION GROUND WATER
16. DATE HOLE: STARTED AUG. 1984 | COMPLETED AUG. 1984
17. ELEVATION TOP OF HOLE: - 41.0
18. TOTAL CORE RECOVERY FOR BORING: N/A %
19. SIGNATURE OF INSPECTOR: H. GATES

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	W.C.	SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
-41.0	0		(CH) BLACK FAT CLAY, VERY SOFT			LAB DATA:
	2					
	4.5–5.0				1	DEPTH 4.5'-5.0'
	6		GRAY, SOFT			
	9.5–10.0				2	DEPTH 9.5'-10.0'
	14.5–15.0				3	DEPTH 14.5'-15.0'
	18					NOTE: BOTTOM OF HOLE @ DEPTH 20.0'.
-61.0	20				4	DEPTH 19.5'-20.0'

LAB DATA:

SAM #	CLASS	LL	PL	PI
1	CH	-	-	-
2	CH	-	-	-
3	CH	-	-	-
4	SM-H	-	-	-

BORING LOG-S | DIVISION: South Atlantic | INSTALLATION: Mobile District | SHEET 1 OF 1 SHEETS

1. PROJECT: CHANNEL DEEPENING - MOBILE HARBOR
2. LOCATION (Coordinates or Station): N 95,520 E 530,200
3. DRILLING AGENCY: MOBILE DISTRICT
4. HOLE NO. (As shown on drawing title and file number): SG-1-82
5. NAME OF DRILLER: J. DETLOFF
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN
8. DEPTH DRILLED INTO ROCK
9. TOTAL DEPTH OF HOLE: 22.5'
10. SIZE AND TYPE OF BIT: [illegible]
11. DATUM FOR ELEVATION SHOWN (FIRM or MSL): MSL
12. MANUFACTURER'S DESIGNATION OF DRILL: P-514 SEAHORSE BARGE
13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN: DISTURBED 15; UNDISTURBED 0
14. TOTAL NUMBER CORE BOXES: 0
15. ELEVATION GROUND WATER: MOBILE BAY (C.O.)
16. DATE HOLE: STARTED 10-26-82; COMPLETED 10-26-82
17. ELEVATION TOP OF HOLE: -43.0'
18. TOTAL CORE RECOVERY FOR BORING: %
19. SIGNATURE OF INSPECTOR: B. BRYANT

W/C %	DEPTH	SYM	CLASSIFICATION OF MATERIALS (DESCRIPTION)	STANDARD PENETRATION (BLOWS PER FOOT) 0 20 40 60
63	0.0		GREENISH GRAY SILTY SANDY FAT CLAY (CH)	4
48	1.5		GREENISH GRAY SILTY FAT CLAY (CH) W/A LITTLE SAND	WR
51	3.0		GREENISH GRAY FAT CLAY (CH) W/SOME SAND, LL = 52, PL = 17, PI = 35, -200 = 78.0%	WR
43	4.5		GREENISH GRAY FAT CLAY (CH) W/SOME SAND	3
54	6.0		GREENISH GRAY FAT CLAY (CH) W/TR. OF SAND & SHELL	4
60	7.5		GREENISH GRAY FAT CLAY (CH) W/TR. OF SAND, LL = 86, PL = 27, PI = 59, -200 = 95.8%	6
59	9.0		GREENISH GRAY FAT CLAY (CH) W/TR. OF SAND & SHELL	10
56	10.5		GREENISH GRAY FAT CLAY (CH) W/TR. OF SAND	8
55	12.0		DK. BROWN SILTY FAT CLAY (CH) W/SOME SAND, -200 = 69.3%	8
63	13.5		DK. BROWN SILTY FAT CLAY (CH) W/SOME SAND	11
104	15.0		DK. BROWN SILTY FAT CLAY (CH) W/A LITTLE SAND & TR. DECAYED WOOD, SL. ORG.	10
52	16.5		DK. BROWN FAT CLAY (CH) W/TR. SAND & DECAYED WOOD	12
	18.0		GREENISH GRAY FAT CLAY (CH) W/SOME SAND & TR. OF DECAYED WOOD	15
	19.5			12
	21.0		GREENISH GRAY CLAYEY SAND (SC-H) HIGH LL	10
	22.5		BOTTOM OF HOLE	20
	24.0		NOTES: [illegible]	
	27.0			

MOB FORM 927 1-[illegible] APR 74

BORING LOG-S | DIVISION: South Atlantic | INSTALLATION: Mobile District | SHEET 1 OF 1 SHEETS

1. PROJECT: CHANNEL DEEPENING - MOBILE HARBOR
2. LOCATION (Coordinates or Station): N 91,260 E 529,650
3. DRILLING AGENCY: MOBILE DISTRICT
4. HOLE NO. (As shown on drawing title and file number): SG-2-82
5. NAME OF DRILLER: J. DETLOFF
6. DIRECTION OF HOLE: ☒ VERTICAL ☐ INCLINED ____ DEG. FROM VERT.
7. THICKNESS OF OVERBURDEN
8. DEPTH DRILLED INTO ROCK
9. TOTAL DEPTH OF HOLE: 22.5'
10. SIZE AND TYPE OF BIT: 3" SPLITSPOON
11. DATUM FOR ELEVATION SHOWN (TIDM or MSL): MSL
12. MANUFACTURER'S DESIGNATION OF DRILL: F-314 SEARCHER BARGE
13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN: DISTURBED 15; UNDISTURBED 0
14. TOTAL NUMBER CORE BOXES: 0
15. ELEVATION GROUND WATER: MOBILE PNY (0.0)
16. DATE HOLE: STARTED 10-26-82; COMPLETED 10-26-82
17. ELEVATION TOP OF HOLE: -44.0'
18. TOTAL CORE RECOVERY FOR BORING: %
19. SIGNATURE OF INSPECTOR: B. BRYANT

W/C %	DEPTH	SYM	CLASSIFICATION OF MATERIALS (DESCRIPTION)	STANDARD PENETRATION (BLOWS PER FOOT)
	0.0			0 20 40 60
174	1.5		GREENISH GRAY SILTY FAT CLAY (CH) W/ SOME SAND	
172	3.0		GREENISH GRAY FAT CLAY (CH) W/A LITTLE SAND, -200 = 83.8%	
57	4.5		W/A TR. OF SAND LL = 81 PL = 22 PI = 59	WR
60	6.0		W/TR. OF SAND & SHELL	
65	7.5		W/TR OF SAND, -200 = 94.9%	4
55	9.0		W/TR. OF SAND & SHELL	5
59	10.5		W/A LITTLE SAND & TR. OF SHELL	5
59	12.0		W/TR. SAND, SHELL & DECAYED WOOD, -200 = 95.1%	6
39	13.5			11
35	15.0			5
			W/TR. OF SAND	11
	18.0			17
				9
	21.0			13
	22.5		BOTTOM OF HOLE	16
	24.0		NOTES: (1) 300 LB. HAMMER [illegible] (2) [illegible] (3) DEPTHS & ELEVATIONS ARE ± 2.0'	
	27.0			

MOB Form 927 [illegible]